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VOL I.

STEEL T RAILS

Sections of Steel and Iron Rails,

MANUFACTURED BY

CAMBRIA IRON COMPANY,

JOHNSTOWN, PENNSYLVANIA.

OFFICE,

No. 218 South Fourth Street,
PHILADELPHIA, PA.

1886.

Aug 7 1888. 86.3
Lawrence Scientific School.

ENGINEERING DEPARTMENT.

TRANSFERRED

TO

HARVARD COLLEGE
LIBRARY





IRON AND STEEL WORKS OF THE CAMBRIA IRON COMPANY.

(INCORPORATED 1852.)



(ONE MILE.)

FURNACES COKE OVENS. WIRE ROD MILL.
Nos. 1, 2, 3 & 4. MACHINE SHOPS. PUDDLE MILL. STEEL RAIL ROLLING MILL. FURNACE No. 5.
STABLES. FOUNDRY. BLACKSMITH SHOPS. IRON RAIL ROLLING MILL.
CAR SHOP. PATTERN SHOP. BOLT & NUT WORKS. BESSEMER CONVERTING WORKS. PERNOT OPEN HEARTH FURNACES.
TIME OFFICES. SPLICE BAR MILL.

PURNAE No. 6.

GENERAL
OFFICES.

ANNUAL CAPACITY OF WORKS.		Total Number of Employees.	ANNUAL CAPACITY OF MINES.
IN TONS OF 2240 LBS.			IN TONS OF 2240 LBS.
Pig Metal, ---	250,000 Tons.	Steel Rails, -- 150,000 Tons.	Iron Ore, - - - - - 500,000 Tons.
Coke, -----	800,000 Tons.	Rail Fastenings, 5,000 Tons.	Coal, - - - - - 775,000 Tons.
Steel Ingots, -	200,000 Tons.	Iron and Steel in other shapes, 50,000 Tons.	Limestone, - - - - - 150,000 Tons.
			Total, - - - - - 1,425,000 Tons.

Eng. 838.80.3

HARVARD UNIVERSITY
SCHOOL OF ENGINEERING

JUN 20 1917
1 TRANSFERRED TO
DANVAN COLLEGE LIBRARY

CAMBRIA IRON COMPANY,

—MANUFACTURERS OF—

STEEL RAILS AND FASTENINGS,

General Office Address: No. 218 SOUTH FOURTH STREET, Philadelphia.

Works at JOHNSTOWN, CAMBRIA CO., PENNA.

The sections presented in this volume are only those of Steel T Rails; Street Rail sections being in a separate volume, and Iron Rail sections (being obsolete) are omitted. Rails of the Standard Sections are frequently in stock and can be furnished immediately, while most of the sections can be promptly rolled. Rolls will be prepared for approved new sections. The weights stated can generally be varied 2 to 4 pounds per yard without changing height or materially altering other dimensions.

This Company strictly inspect all their manufactures before shipment, and any rails not up to the standard of first quality are rejected and classed as "Seconds." The wear of rails so classed is not generally impaired, and they are sold at reduced price for sidings and roads where low speeds are used. For these or car load lots from stock apply direct to the works.

The long experience of the present management of the Company, (since 1855), and the enviable reputation established for "Cambria Rails," are deemed a sufficient guarantee that purchasers can at all times depend upon receiving rails unsurpassed for strength and wear by any others of American or Foreign make.

STANDARD SECTIONS

IN MOST GENERAL USE.

16 lbs.	No. 121.
20 "	" 122.
25 "	" 104.
30 "	" 71.
35 "	" 81.
40 "	" 90.
50 "	" 100.
*56 "	" 73.
*60 "	" 56.
*67 "	" 55.
*70 "	" 125.
*75 "	" 130.

*The same splice bar will fit all of these sections.

50 lbs. No. 60, 50 lbs. No. 85,
56 lbs. No. 68, 58 lbs. No. 54, 60
lbs. No. 99, 60 lbs. No. 112, 60
lbs. No. 118, 60 lbs. No. 129 and
66 lbs. No. 88 are also approved
sections.

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INDEX TO FIND SECTION NUMBERS.

Steel T Rail Sections, Vol. 1.
 Iron T Rail Sections, Vol. 2. (*Obsolete*)
 Street Rail Sections, Vol. 3.
 Rail Fastenings, Vol. 4.

EACH VOL. ARRANGED ACCORDING TO WEIGHT OF RAILS.

No.	Weight.	No.	Weight.	No.	Weight.
1 Iron	88 lbs.	45 Iron	56 lbs.	88 Steel	66 lbs.
2 Iron	67 lbs.	46 Iron	40 lbs.	89 Steel	46 lbs. Street
3 Iron	64 lbs.	47 Steel	62 $\frac{1}{16}$ lbs.	90 Steel	40 lbs. .
4 Iron	62 lbs.	48 Iron	30 lbs.	91 Iron	40 lbs.
5 Iron	61 lbs.	49 Steel	60 lbs.	92 Iron	16 lbs.
6 Iron	61 lbs.	50 Steel	62 lbs.	93 Steel	42 lbs. Street
7 Iron	60 lbs.	51 Steel	61 lbs.	94 Steel	66 lbs.
8 Iron	60 lbs.	52 Steel	56 lbs.	95 Steel	60 lbs.
9 Iron	60 lbs.	53 Iron	56 lbs.	96 Iron	24 lbs.
10 Iron	68 lbs.	54 Steel	58 lbs.	97 Steel	44 lbs. Street
11 Iron	57 lbs.	55 Steel	67 lbs.	98 Steel	40 lbs. Street
12 Iron	56 lbs.	56 Steel	60 lbs.	99 Steel	60 lbs.
13 Iron	56 lbs.	57 Iron	60 lbs.	100 Steel	60 lbs.
14 Iron	62 lbs.	58 Steel	80 lbs.	101 Steel	45 lbs. Street
15 Iron	50 lbs.	59 Steel	60 lbs.	102 Steel	50 lbs. Street
16 Iron	50 lbs.	60 Steel	50 lbs.	103 Steel	47 lbs. Street
17 Iron	50 lbs.	61 Iron	45 lbs.	104 Steel	25 lbs.
18 Iron	45 lbs.	62 Iron	54 lbs.	105 Steel	48 lbs. Street
19 Iron	48 lbs.	63 Steel	56 lbs.	106 Steel	27 lbs. Street
20 Iron	43 lbs.	64 Iron	29 lbs.	107 Steel	66 lbs.
21 Iron	48 lbs. Street	65 Steel	62 $\frac{1}{16}$ lbs.	108 Steel	62 lbs. Street
22 Iron	41 lbs. Street	66 Steel	60 lbs.	109 Steel	52 lbs.
23 Iron	35 lbs.	67 Iron	35 lbs.	110 Steel	60 lbs. Street
24 Iron	24 lbs.	68 Steel	58 lbs.	111 Steel	88 lbs. Street
25 Iron	16 lbs.	69 Steel	30 lbs.	112 Steel	60 lbs.
26 Iron	61 lbs.	70 Steel	52 $\frac{1}{16}$ lbs.	113 Steel	60 lbs.
27 Iron	56 lbs.	71 Steel	80 lbs.	114 Steel	80 & 86 lbs. Street
28 Iron	65 lbs.	72 Steel	86 $\frac{1}{16}$ lbs. Street	115 Steel	80 lbs. Street
29 Steel	67 lbs.	73 Steel	56 lbs.	116 Steel	44 lbs. Street
30 Iron	61 lbs.	74 Steel	60 lbs.	117 Steel	76 $\frac{1}{16}$ lbs. Street
31 Iron	67 lbs.	75 Iron	66 lbs.	118 Steel	62 lbs. Street
32 Ir. or St. 60	lbs.	76 Steel	60 lbs.	119 Steel	45 lbs. Street
33 Iron	64 lbs.	77 Steel	60 lbs.	120 Steel	58 $\frac{1}{16}$ lbs. Street
34 Iron	53 lbs.	78 Iron	52 lbs.	121 Steel	20 lbs.
35 Iron	66 lbs.	79 Iron	60 lbs.	122 Steel	16 lbs.
36 Iron	60 lbs.	80 Iron	48 lbs.	123 Steel	60 lbs. Street
37 Iron	48 lbs.	81 Steel	35 lbs.	124 Steel	68 lbs. Street
38 Steel	60 lbs.	82 Steel	56 lbs.	125 Steel	70 lbs.
39 Iron	60 lbs.	83 Steel	43 lbs. Street	126 Steel	62 lbs. Street
40 Iron	60 lbs.	84 Iron	56 lbs.	127 Steel	58 lbs. Street
41 Steel	60 lbs.	85 Steel	50 lbs.	128 Steel	62 lbs. Street
42 Steel	68 $\frac{1}{16}$ lbs.	86 Iron	47 lbs.	129 Steel	60 lbs.
43 Iron	60 lbs.	87 Steel	59 lbs.	130 Steel	75 lbs.
44 Iron	56 lbs.				



CAMBRIA IRON CO., JOHNSTOWN, PA., OFFICE, 218 SOUTH FOURTH STREET, PHILADELPHIA.

USEFUL INFORMATION ABOUT MATERIALS FOR TRACK CONSTRUCTION.

RAILS REQUIRED PER MILE, OF THE OWING WEIGHTS PER YARD.		RAILROAD SPIKES.				NUMBER OF JOINT FASTENINGS REQUIRED TO THE TON OF RAILS.							
Per mile.		Size, measured under head.	Average No. per keg of 150 lbs.	Ties two feet between centres, four spikes per tie, makes per mile.	Rail used, weight per yard.	Weight of Rail per yd.	24 Foot Rail.	25 Foot Rail.	26 Foot Rail.	27 Foot Rail.	28 Foot Rail.	30 Foot Rail.	
25 gro. tons, 320 lbs.	Inches.		Pounds. Kegs.			Pound.	Joints.	Joints.	Joints.	Joints.	Joints.	Joints.	
31 " 960 "	5½ x 1⁹/₁₆	280	5670 = 38	45 to 70	30	9.33	8.95	8.61	8.29	8.00	7.46		
39 " 640 "	5 x 1⁹/₁₆	300	5170 = 35	40 to 56	35	8.00	7.67	7.38	7.10	6.85	6.40		
44 " 000 "	5 x 1 ½	340	4660 = 31	35 to 40	40	7.00	6.71	6.45	6.22	5.99	5.60		
47 " 320 "	4½ x 1 ½	400	3960 = 27	30 to 35	45	6.22	5.96	5.74	5.52	5.33	4.97		
55 " 000 "	4 x 1 ½	450	3520 = 24	28 to 35	50	5.60	5.37	5.16	4.97	4.79	4.48		
62 " 1920 "	4½ x 1 ½	510	3110 = 21	25 to 30	56	5.00	4.79	4.61	4.44	4.28	4.00		
70 " 1600 "	4 x 1 ½	540	2940 = 20		60	4.66	4.47	4.30	4.14	4.00	3.73		
78 " 1280 "	3½ x 1 ½	675	2350 = 16	20 to 25	62	4.51	4.33	4.16	4.01	3.86	3.61		
81 " 1600 "	4 x 1 ½	760	2090 = 14		64	4.37	4.19	4.03	3.88	3.74	3.50		
88 " 000 "	3½ x 1 ½	890	1780 = 12	16 to 20	67	4.17	4.00	3.85	3.71	3.58	3.34		
89 " 1280 "	3 x 1 ½	930	1710 = 11 ½										
FISH PLATES AND BOLTS FOR ONE MILE OF TRACK.													
94 " 640 "	CROSS-TIES, PER MILE.				Length of Rail. Feet.	Number of Fish Plates required.	Number of Bolts.		Number of Rails or Complete Joints.				
97 " 960 "	Centre to Centre.				Ties.		24	880	1760	440			
100 " 1280 "	18 inches,				3520		25	884	1688	422			
102 " 320 "	21 " 				3017		26	812	1624	406			
105 " 640 "	24 " 				2640		27	782	1564	391			
106 " 1920 "	27 " 				2348		28	754	1508	377			
110 " 000 "	30 " 				2113		30	704	1408	352			

2

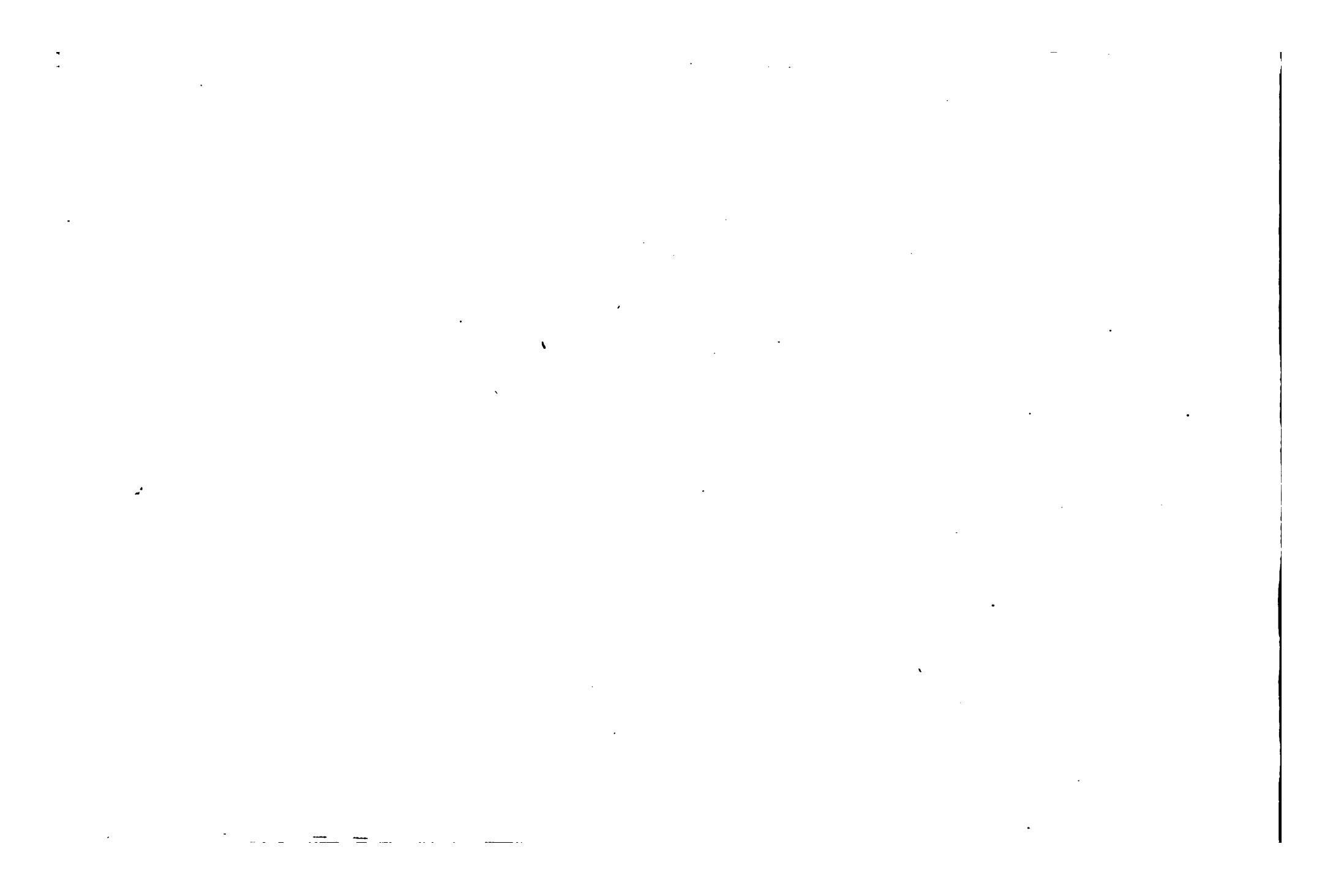
INDEX FOR "T" RAILS,—RAILROADS OR CONTRACTORS.

S.=Steel. I.=Iron.

**1bs.
No.**

Steel T Rails, Vol. I; Iron T Rails, Vol. II; Steel Street Rails, Vol. III; Rail Fastenings, Vol. IV; Steel Angles and Other Shapes, Vol. V.
Each Vol. of Rails arranged according to weight.

Alexandria Coal Co.,—S. $\frac{1}{16}$.	Cairo and Vincennes R. R.,—S. $\frac{1}{16}$. ($\frac{1}{16}$ — $\frac{1}{8}$).
Alger, R. A. & J. S. Newberry,—S. $\frac{1}{16}$, $\frac{1}{8}$.	Calumet and Hecla Mining Co.,—I. $\frac{1}{16}$, $\frac{1}{8}$. S. $\frac{1}{16}$, $\frac{1}{8}$.
Alger, Smith & Co.,—S. $\frac{1}{16}$.	Campbell's Creek Coal Co.,—S. $\frac{1}{16}$, $\frac{1}{8}$.
Allegheny Valley R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$, $\frac{1}{4}$.	Carolina Central R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$.
Allegheny Valley R. R., (Bennett Branch,)—I. $\frac{1}{8}$.	Central R. R. of New Jersey,—S. $\frac{1}{16}$.
Allen, C. D.,—S. $\frac{1}{16}$, $\frac{1}{8}$.	Central Pacific R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$.
American Iron Mt. Mining Co.,—I. $\frac{1}{8}$.	Cessna, Daniel,—S. $\frac{1}{16}$.
Amygdaloid Mining Co.,—I. $\frac{1}{8}$.	Charleston M. & M. Co.,—S. $\frac{1}{16}$.
Argyle Coal Co.,—S. $\frac{1}{16}$.	Charlotte Furnace Co.,—S. $\frac{1}{16}$.
Arizona Copper Co.,—S. $\frac{1}{16}$.	Chartiers R. R.,—I. $\frac{1}{16}$.
Asilard Coal and Iron Ry.,—S. $\frac{1}{16}$.	Chesapeake and Ohio R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$.
Atchison and Nebraska R. R.,—I. $\frac{1}{8}$.	Cheshire R. R.,—S. $\frac{1}{16}$.
Atchison, Topeka and Santa Fe R. R.,—I. $\frac{1}{16}$, $\frac{1}{8}$, $\frac{1}{4}$.	Chicago and Alton R. R.,—I. $\frac{1}{16}$.
Athol and Enfield R. R.,—I. $\frac{1}{16}$.	Chicago and Canada Southern R. R.,—I. $\frac{1}{16}$.
Atlantic and Danville R. R.,—S. $\frac{1}{16}$.	Chicago and Galena Union R. R.,—I. $\frac{1}{16}$.
Atlantic and Great Western R. R.,—I. $\frac{1}{16}$.	Chicago and Michigan Lake Shore R. R.,—I. $\frac{1}{16}$, $\frac{1}{8}$.
Atlantic and Pacific R. R.,—I. $\frac{1}{16}$, $\frac{1}{8}$.	Chicago and Northwestern R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$, I. $\frac{1}{8}$.
Bald Eagle Valley R. R.,—I. $\frac{1}{4}$.	Chicago and Southwestern R. R.,—I. $\frac{1}{16}$, $\frac{1}{8}$.
Baltimore and Delta R. R.,—S. $\frac{1}{16}$.	Chicago, Burlington and Quincy R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$, I. $\frac{1}{8}$.
Baltimore and Ohio R. R.,—S. $\frac{1}{16}$.	Chicago, Burlingame, and Quincy R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$, I. $\frac{1}{8}$.
Baltimore and Potomac R. R.,—S. $\frac{1}{16}$, I. $\frac{1}{8}$.	Chicago City R. R.,—I. $\frac{1}{16}$.
Baltimore Union Pass. Ry.,—S. $\frac{1}{16}$.	Chicago, Milwaukee and St. Paul R. R.,—S. $\frac{1}{16}$.
Beaver Creek and C. River C. & C. Co.,—S. $\frac{1}{16}$.	Chicago, Rock Island and Pacific R. R.,—I. $\frac{1}{16}$, $\frac{1}{8}$, $\frac{1}{4}$, S.
Bedford and Bridgeport R. R.,—I. $\frac{1}{16}$.	Chicago, St. Louis and New Orleans R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$, $\frac{1}{4}$.
Bedford R. R.,—I. $\frac{1}{16}$.	Chippewa Lumber & Boom Co.,—S. $\frac{1}{16}$.
Beecher & Copeland,—S. $\frac{1}{16}$.	Chippewa Lumber Co.,—S. $\frac{1}{16}$.
Bellefontaine R. R.,—I. $\frac{1}{16}$.	Cincinnati and Eastern R. R.,—S. $\frac{1}{16}$.
Bellefonte and Snow Shoe R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$.	Cincinnati and Springfield R. R.,—I. $\frac{1}{16}$.
Bell, Lewis & Yates,—S. $\frac{1}{16}$.	Cincinnati, Hamilton and Dayton R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$, $\frac{1}{4}$.
Bell, Thos. W.,—S. $\frac{1}{16}$.	Clark Mines (Michigan),—I. $\frac{1}{16}$.
Bells Gap R. R.,—I. $\frac{1}{16}$, $\frac{1}{8}$, S. $\frac{1}{16}$.	Clarksburg, Weston and Greenfield R. R.,—S. $\frac{1}{16}$.
Bliss and Marshall,—S. $\frac{1}{16}$, $\frac{1}{8}$.	Cleveland and Pittsburgh R. R.,—S. $\frac{1}{16}$, I. $\frac{1}{8}$, $\frac{1}{4}$.
Blodget and Byrne,—S. $\frac{1}{16}$.	Cleveland and Toledo R. R.,—I. $\frac{1}{16}$.
Boston and Providence R. R.,—S. $\frac{1}{16}$.	Cleveland, Columbus and Cincinnati R. R.,—I. $\frac{1}{16}$.
Boston, Lowell and Nashua R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$.	Cleveland, Columbus, Cincinnati and Indianapolis R. R.,—I. $\frac{1}{16}$.
Bowers, Brown & Co.,—S. $\frac{1}{16}$.	Cleveland, Mt. Vernon and Columbus R. R.,—S. $\frac{1}{16}$, I. $\frac{1}{8}$.
Bridgeton and Saco R. R.,—S. $\frac{1}{16}$.	Cleveland, Mt. Vernon and Delaware R. R.,—I. $\frac{1}{16}$.
Brooklyn St. Ry.,—S. $\frac{1}{16}$.	Cleveland, Painesville and Ashtabula R. R.,—I. $\frac{1}{8}$, $\frac{1}{4}$.
Brown, Howard & Co.,—S. $\frac{1}{16}$.	Collins, Thos.,—S. $\frac{1}{16}$.
Buffalo and Erie R. R.,—I. $\frac{1}{16}$.	Columbus and Hocking Valley R. R.,—I. $\frac{1}{16}$.
Buffalo and Jamestown R. R.,—S. $\frac{1}{16}$.	Columbus and Indianapolis Central R. R.,—I. $\frac{1}{16}$.
Buffalo, Corry and Pittsburgh R. R.,—I. $\frac{1}{16}$.	Columbus and Indiana Central R. R.,—I. $\frac{1}{16}$.
Buffalo, New York and Philadelphia R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$, $\frac{1}{4}$.	Burlington and North Western Narrow Gauge R. R.,—I. $\frac{1}{16}$.
Buffalo, New York and Western R. R.,—S. $\frac{1}{16}$.	Burns & Neakes,—S. $\frac{1}{16}$.
Buffalo Valley R. R.,—I. $\frac{1}{16}$.	Burlington and Missouri R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$, $\frac{1}{4}$, I. $\frac{1}{8}$, $\frac{1}{4}$.
Burlington and Missouri R. R.,—S. $\frac{1}{16}$, $\frac{1}{8}$, $\frac{1}{4}$, I. $\frac{1}{8}$, $\frac{1}{4}$.	Burlington and Missouri River R. R.,—I. $\frac{1}{16}$.
Burlington and Missouri River R. R., of Iowa,—I. $\frac{1}{16}$.	Burlington and Missouri River R. R., of Nebraska,—I. $\frac{1}{16}$.
Burns & Neakes,—S. $\frac{1}{16}$.	Burlington and North Western Narrow Gauge R. R.,—I. $\frac{1}{16}$.
Columbus, Chicago and Indiana Central R. R.,—I. $\frac{1}{16}$.	Columbus, Chicago and Indiana Central R. R.,—I. $\frac{1}{16}$.



INDEX FOR "T" RAILS,—RAILROADS OR CONTRACTORS. *Continued.*

Concord R. R.,—S. $\frac{1}{4}$.	Grand Rapids, Newago and Lake Shore R. R.,—S. $\frac{1}{4}$.
Conglomerate Mining Co.,—S. $\frac{10}{10}$.	($\frac{1}{2}$ — $\frac{1}{4}$), $\frac{1}{4}$.
Connecticut and Passumpsic R. R.,—S. $\frac{10}{10}$.	Gratwick, Smith & Fryer Lumber Co.,—S. $\frac{1}{4}$.
Connotton Valley R. R.,—S. $\frac{1}{4}$.	Green Bay, Winona and St. Paul R. R.,—S. $\frac{1}{4}$.
Consolidation Coal Co.,—S. $\frac{1}{4}$.	Greenlick Narrow Gauge R. R.,—S. $\frac{1}{4}$.
Cook, D. S.,—S. $\frac{1}{4}$.	Gulf, Colorado and Santa Fe R. R.,—I. $\frac{1}{4}$.
Cowley, Sumner and Fort Scott R. R.,—I. $\frac{1}{4}$.	Hamilton St. Ry.,—S. $\frac{1}{4}$.
Cumberland and Pennsylvania R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	Hannibal and St. Joseph R. R.,—S. $\frac{1}{4}$.
Cumberland Hyd. Cement Co.,—S. $\frac{10}{10}$.	Hanover Junction, Hanover and Gettysburg R. R.,—S. $\frac{1}{4}$.
Cumberland Valley R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{4}$.	Harris, Wm. A.,—S. $\frac{1}{4}$.
Cunard Mines,—I. $\frac{1}{4}$.	Hartley & Marshall,—S. $\frac{1}{4}$.
Danville and New River R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$.	Harry & Friend,—I. $\frac{1}{4}$.
Dayton and Ironton R. R.,—S. $\frac{1}{4}$.	Henry, Bayard & Co.,—S. $\frac{1}{4}$, $\frac{1}{4}$.
Dayton and Michigan R. R.,—I. $\frac{1}{4}$.	Herkimer, Newport & Poland R. R.,—S. $\frac{1}{4}$.
Dayton and Southeastern R. R.,—I. $\frac{1}{4}$.	Hillside Coal and Iron Co.,—S. $\frac{1}{4}$.
Delaware and Hudson Canal Co's R. R.,—S. $\frac{1}{4}$.	Hoover, Hughes & Co.,—S. $\frac{1}{4}$.
Delaware, Lackawanna and Western R. R.,—S. $\frac{1}{4}$.	Horton, Cary & Co.,—S. $\frac{1}{4}$.
Delaware, Maryland and Virginia R. R.,—S. $\frac{1}{4}$.	Houston St. Ry.,—S. $\frac{1}{4}$.
Delaware River R. R.,—S. $\frac{1}{4}$.	Huntingdon & Broad Top R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.
Denver and Rio Grande R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$.	Huntington, C. P.,—S. $\frac{1}{4}$.
Des Moines Railway Construction Co.,—I. $\frac{1}{4}$.	Illinois and St. Louis Bridge Co.,—S. $\frac{1}{4}$, $\frac{1}{4}$.
Detroit and Bay City R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$.	Illinois and Southern Iowa R. R.,—I. $\frac{1}{4}$.
Detroit, Eel River and Illinois R. R.,—I. $\frac{1}{4}$.	Illinois Central R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$.
Detroit, Lansing and Lake Michigan R. R.,—I. $\frac{1}{4}$.	Indianapolis and Cincinnati R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$.
Detroit Transit Railway,—I. $\frac{1}{4}$.	Indianapolis and St. Louis R. R.,—I. $\frac{1}{4}$.
Dubuque and Sioux City R. R.,—I. $\frac{1}{4}$.	Indianapolis, Cincinnati and Lafayette R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$.
Duluth and Dubuque Bridge Co.,—S. $\frac{1}{4}$.	International and Great Northern R. R.,—S. $\frac{1}{4}$.
East Broad Top R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	International Navigation Co.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.
East Lexington and Big Sandy R. R.,—S. $\frac{1}{4}$.	Iron Mountain Co.,—I. $\frac{1}{4}$.
East Tennessee, Virginia and Georgia R. R.,—S. $\frac{1}{4}$.	Iron Railway,—S. $\frac{1}{4}$, $\frac{1}{4}$.
Detroit Transit Railway,—I. $\frac{1}{4}$.	Ironton R. R.,—I. $\frac{1}{4}$.
Dubuque and Sioux City R. R.,—I. $\frac{1}{4}$.	Isabella Furnace,—S. $\frac{1}{4}$.
Duluth and Dubuque Bridge Co.,—S. $\frac{1}{4}$.	Iselin & Co., A.,—S. $\frac{1}{4}$.
Erie Railway, S. $\frac{1}{4}$, $\frac{1}{4}$.	Jackson & Co., E. E., S. $\frac{1}{4}$.
European and North American R. R.,—S. $\frac{1}{4}$.	Jacksonville Southeastern R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$.
Everett Iron Co.,—S. $\frac{1}{4}$.	Jeffersonville, Madison and Indianapolis R. R.,—S. $\frac{1}{4}$.
Everson Knap Co.,—I. $\frac{1}{4}$.	Johnson & Son, Greenleaf,—S. $\frac{1}{4}$.
Fairbanks Furnace Co.,—S. $\frac{1}{4}$.	Juniauta Mining Co.,—S. $\frac{1}{4}$.
Fayette Coke and Furnace Co.,—S. $\frac{1}{4}$.	Kansas City, St. Joseph and Council Bluffs R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$.
Fire Creek Coal and Coke Co.,—S. $\frac{1}{4}$.	Kansas City Street Ry.,—S. $\frac{1}{4}$.
Fisher, Miller & Co.,—S. $\frac{1}{4}$.	Kansas Pacific R. R.,—I. $\frac{1}{4}$.
Fitchburg R. R.,—S. $\frac{1}{4}$.	Kans City and Butler R. R.,—S. $\frac{1}{4}$.
Fletcher, Pack & Co.,—S. $\frac{1}{4}$.	Kemble Coal and Iron Company,—I. $\frac{1}{4}$.
Flint and Pere Marquette R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	Kendell and Eldred R. R.,—I. $\frac{1}{4}$.
Fort Dodge and Fort Ridgely R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	Kentucky Central R. R.,—I. $\frac{1}{4}$, S. $\frac{1}{4}$.
Fort Scott, Southeastern and Memphis R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{4}$.	Keokuk and Des Moines R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{4}$.
Fort Wayne, Jackson and Saginaw R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	Keystone Coal Co.,—S. $\frac{1}{4}$.
Fort Worth St. Ry.,—S. $\frac{1}{4}$.	Laclede Iron Manufacturing Co.,—I. $\frac{1}{4}$.
Galena and Southern Wisconsin R. R.,—I. $\frac{1}{4}$.	Ladd, W. S.,—S. $\frac{1}{4}$.
Galveston City Ry. Co.,—S. $\frac{1}{4}$.	Lake Angelina Mining Co.,—I. $\frac{1}{4}$.
Garden City Mining Co.,—I. $\frac{1}{4}$.	Lake Erie and Western R. R.,—S. $\frac{1}{4}$.
George, D. C.,—S. $\frac{1}{4}$.	Lake Shore and Michigan Southern R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{4}$, $\frac{1}{4}$.
Gillman, Clinton and Springfield R. R.,—I. $\frac{1}{4}$.	Lake Superior and Mississippi R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$.
Grand Haven Lumber Co.,—S. $\frac{1}{4}$.	
Grand Rapids and Indiana R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	

E

INDEX FOR "T" RAILS,—RAILROADS OR CONTRACTORS. *Continued.*

Lamb, H. N.,—S. $\frac{1}{4}$.
 Land Grant R. R.,—I. $\frac{1}{4}$.
 Lawrence R. R.,—I. $\frac{1}{4}$, $\frac{1}{2}$.
 Leavenworth and Des Moines R. R.,—I. $\frac{1}{4}$.
 Leavenworth, Lawrence and Galveston R. R.,—I. $\frac{1}{4}$, $\frac{1}{2}$.
 Lehigh Valley R. R.,—S. $\frac{1}{4}$, $\frac{1}{2}$.
 Lexington and Big Sandy R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{2}$.
 Ligonier Valley R. R.,—I. $\frac{1}{4}$, $\frac{1}{2}$, S. $\frac{1}{4}$.
 Lincoln and Northwestern R. R.,—I. $\frac{1}{4}$.
 Little Miami, Columbus and Xenia R. R.,—I. $\frac{1}{4}$.
 Lonias, Forger Bridge Co.,—S. $\frac{1}{4}$.
 Louisville B. and I. Co.,—S. $\frac{1}{4}$.
 Louisville and Frankfort R. R.,—I. $\frac{1}{4}$.
 Louisville and Nashville R. R.,—S. $\frac{1}{4}$, $\frac{1}{2}$, I. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$.
 Louisville, Cincinnati and Lexington R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{2}$.
 Louisville, New Albany and Chicago R. R.,—S. $\frac{1}{4}$.
 Louisville, Paducah and Southwestern R. R.,—S. $\frac{1}{4}$.
 Lykens Valley Coal Co.,—S. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$.
 Lyon, Thos. R.,—S. $\frac{1}{4}$.
 Maine Central R. R.,—S. $\frac{1}{4}$.
 Mapleton Coal Co.,—I. $\frac{1}{4}$.
 Maryland Central R. R.,—S. $\frac{1}{4}$.
 Maryland Union Coal Co.,—S. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$.
 Monongahela and P. Creek Gas Coal Co.,—S. $\frac{1}{4}$.
 Mexican Central R. R.,—S. $\frac{1}{4}$, $\frac{1}{2}$.
 Michigan Central R. R.,—S. $\frac{1}{4}$.
 Michigan Southern and Northern Indiana R. R.,—I. $\frac{1}{4}$.
 Midland Construction Co.,—S. $\frac{1}{4}$.
 Mifflin and Centre County R. R.,—I. $\frac{1}{4}$.
 Miller, M. Erskine, —S. $\frac{1}{4}$.
 Miller, Thomas & Co.,—S. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$.
 Mill Springs, Current River and Barnesville R. R.,—S. $\frac{1}{4}$.
 Milwaukee and Northern R. R.,—S. $\frac{1}{4}$.
 Mineral Railroad and Mining Co.,—S. $\frac{1}{4}$, $\frac{1}{2}$.
 Mineral Range R. R.,—S. $\frac{1}{4}$, $\frac{1}{2}$, I. $\frac{1}{2}$.
 Mississippi and Tennessee R. R.,—I. $\frac{1}{4}$, S. $\frac{1}{4}$, $\frac{1}{2}$.
 Mississippi Central R. R.,—S. $\frac{1}{4}$, $\frac{1}{2}$, I. $\frac{1}{4}$, $\frac{1}{2}$.
 Missouri, Kansas and Texas Railway,—S. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$.
 Missouri River, Fort Scott and Gulf R. R.,—I. $\frac{1}{4}$.
 Missouri River, Pacific R. R.,—I. $\frac{1}{4}$.
 Mobile and Montgomery R. R.,—S. $\frac{1}{4}$.
 Moredale Colliery,—I. $\frac{1}{4}$.
 Morley Bros.,—S. $\frac{1}{4}$.
 Morrisdale Coal Co.,—I. $\frac{1}{4}$.
 Moshassuck Valley R. R.,—I. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{2}$.
 Mount Gilead Short Line R. R.,—I. $\frac{1}{4}$.
 Mount Pleasant and Broad Ford R. R.,—I. $\frac{1}{4}$.
 Mutual Mining and Mfg. Co.,—S. $\frac{1}{4}$.
 McCline & Co.,—S. $\frac{1}{4}$.
 McClure & Co.,—S. $\frac{1}{4}$.
 McFadden & Kelly,—S. $\frac{1}{4}$.
 McGovern, Son & Co., John,—S. $\frac{1}{4}$.
 McLaughlin, P.,—S. $\frac{1}{4}$.
 Nashville, Chattanooga and St. Louis R. R.,—S. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$.
 Natchez, Jackson and Columbus R. R.,—I. $\frac{1}{4}$.

New Orleans, Jackson and Northern R. R.,—S. $\frac{1}{4}$.
 New Orleans, St. Louis and Chicago R. R.,—I. $\frac{1}{4}$.
 New York Elevated Railway,—S. $\frac{1}{4}$.
 New York, Lake Erie and Western R. R.,—S. $\frac{1}{4}$, $\frac{1}{2}$.
 New York, New England and W. Invest. Co.,—S. $\frac{1}{4}$.
 New York, Phila. and Norfolk R. R.,—S. $\frac{1}{4}$.
 Norfolk & Western R. R.,—S. $\frac{1}{4}$.
 Northern Central Railway (of Pa.),—S. $\frac{1}{4}$, I. $\frac{1}{2}$.
 Northern Illinois Coal and Iron Co.,—I. $\frac{1}{4}$.
 Northern Pacific R. R.,—I. $\frac{1}{4}$.
 Northern R. R. (of N. H.),—S. $\frac{1}{4}$, $\frac{1}{2}$.
 Northwestern Railway,—I. $\frac{1}{4}$.
 Northwest Mining & Exchange Co.,—S. $\frac{1}{4}$.
 Ohio and Mississippi R. R.,—I. $\frac{1}{4}$, S. $\frac{1}{4}$.
 Ohio Central Railway,—I. $\frac{1}{4}$.
 Ohio Southern R. R.,—S. $\frac{1}{4}$.
 Oil City and Chicago R. R.,—S. $\frac{1}{4}$.
 Oil Creek and Allegheny Valley R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{2}$.
 Old Colony R. R.,—S. $\frac{1}{4}$, $\frac{1}{2}$.
 Olean, Bradford and Warren R. R.,—I. $\frac{1}{4}$, $\frac{1}{2}$.
 Omaha and Northwestern R. R.,—I. $\frac{1}{4}$.
 Pacific Improvement Co.,—S. $\frac{1}{4}$.
 Pacific R. R.,—I. $\frac{1}{4}$.
 Pacific R. R. of Mo.,—I. $\frac{1}{4}$.
 Pacific Railway Improvement Co.,—I. $\frac{1}{4}$.
 Palmer, Nichols & Co.,—S. $\frac{1}{4}$.
 Parker and Karns City R. R.,—S. $\frac{1}{4}$.
 Patomac Coal Co.,—S. $\frac{1}{4}$.
 Peachbottom R. R.,—S. $\frac{1}{4}$.
 Penn Gas Coal Co's R. R.,—S. $\frac{1}{4}$.
 Pennsylvania Co.,—S. $\frac{1}{4}$.
 Pennsylvania R. R.,—I. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{2}$, S. $\frac{1}{4}$, $\frac{1}{2}$, S. $\frac{1}{4}$, $\frac{1}{2}$, S. $\frac{1}{4}$, $\frac{1}{2}$.
 Pensacola and Perdido R. R.,—S. $\frac{1}{4}$.
 Peoria, Pekin and Jacksonville R. R.,—S. $\frac{1}{4}$.
 Peters, R. G.,—S. $\frac{1}{4}$.
 Phelps, Willis,—I. $\frac{1}{4}$.
 Philadelphia and Erie R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{4}$, $\frac{1}{2}$.
 Philadelphia, Wilmington and Baltimore R. R.,—S. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$.
 Phoenix Copper Co.,—I. $\frac{1}{4}$, $\frac{1}{2}$.
 Piper & Co., W. H.,—S. $\frac{1}{4}$.
 Pittsburgh and Connellsville R. R.,—I. $\frac{1}{4}$, $\frac{1}{2}$.
 Pittsburgh and Lake Angeline I. C.,—S. $\frac{1}{4}$.
 Pittsburgh, Castle Shannon and Washington R. R.,—I. $\frac{1}{4}$.
 Pittsburgh, Cincinnati and St. Louis Railway,—S. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$.
 Pittsburgh, Cincinnati and St. Louis Railway, C. and M. V. Division,—I. $\frac{1}{4}$.
 Pittsburgh, Fort Wayne and Chicago R. R.,—S. $\frac{1}{4}$, $\frac{1}{2}$.
 Pittsburgh Southern R. R.,—I. $\frac{1}{4}$, $\frac{1}{2}$.
 Pittsburgh, Titusville and Buffalo R. R.,—I. $\frac{1}{4}$, $\frac{1}{2}$.
 Pittsburgh, Virginia and Charlestown R. R.,—I. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{2}$.
 Pittsburgh, Wheeling and Kentucky R. R.,—I. $\frac{1}{4}$.
 Pontiac, Oxford & Port Austin R. R.,—S. $\frac{1}{4}$.

E

INDEX FOR "T" RAILS,—RAILROADS OR CONTRACTORS.

S.=Steel. **I.=Iron.** **1bs.**
 † No.

Steel T Rails, Vol. I; Iron T Rails, Vol. II; Steel Street Rails, Vol. III; Rail Fastenings, Vol. IV; Steel Angles and Other Shapes, Vol. V.
Each Vol. of Rails arranged according to weight.

Alexandria Coal Co.,—S. $\frac{1}{16}$.
 Alger, R. A. & J. S. Newberry,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 Alger, Smith & Co.,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 Allegheny Valley R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$, I. $\frac{1}{16}$, $\frac{1}{12}$.
 Allegheny Valley R. R., (Bennett Branch,)—I. $\frac{1}{16}$.
 Allen, C. D.,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 American Iron Mt. Mining Co.,—I. $\frac{1}{16}$.
 Amygdaloid Mining Co.,—I. $\frac{1}{16}$.
 Argyle Coal Co.,—S. $\frac{1}{16}$.
 Arizona Copper Co.,—S. $\frac{1}{16}$.
 Ashland Coal and Iron Ry.,—S. $\frac{1}{16}$.
 Atchison and Nebraska R. R.,—I. $\frac{1}{16}$.
 Atchison, Topeka and Santa Fe R. R.,—I. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{16}$.
 Athol and Enfield R. R.,—I. $\frac{1}{16}$.
 Atlantic and Danville R. R.,—S. $\frac{1}{16}$.
 Atlantic and Great Western R. R.,—I. $\frac{1}{16}$.
 Atlantic and Pacific R. R.,—I. $\frac{1}{16}$, $\frac{1}{12}$.
 Bald Eagle Valley R. R.,—I. $\frac{1}{16}$.
 Baltimore and Delta R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 Baltimore and Ohio R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 Baltimore and Potomac R. R.,—S. $\frac{1}{16}$, I. $\frac{1}{12}$.
 Baltimore Union Pass. Ry.,—S. $\frac{1}{16}$.
 Beaver Creek and C. River C. & C. Co.,—S. $\frac{1}{16}$.
 Bedford and Bridgeport R. R.,—I. $\frac{1}{16}$.
 Bedford R. R.,—I. $\frac{1}{16}$.
 Beecher & Copeland,—S. $\frac{1}{16}$.
 Bellemontaine R. R.,—I. $\frac{1}{16}$.
 Bellefontaine and Snow Shoe R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 Bell, Lewis & Yates,—S. $\frac{1}{16}$.
 Bell, Thos. W.,—S. $\frac{1}{16}$.
 Bells Gap R. R.,—I. $\frac{1}{16}$, $\frac{1}{12}$, S. $\frac{1}{16}$.
 Bliss and Marshall,—S. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{16}$.
 Blodget and Byrne,—S. $\frac{1}{16}$.
 Boston and Providence R. R.,—S. $\frac{1}{16}$.
 Boston, Lowell and Nashua R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 Bowers, Brown & Co.,—S. $\frac{1}{16}$.
 Bridgton and Saco R. K.,—S. $\frac{1}{16}$.
 Brooklyn St. Ry.,—S. $\frac{1}{16}$.
 Brown, Howard & Co.,—S. $\frac{1}{16}$.
 Buffalo and Erie R. R.,—I. $\frac{1}{16}$.
 Buffalo and Jamestown R. R.,—S. $\frac{1}{16}$.
 Buffalo, Corry and Pittsburgh R. R.,—I. $\frac{1}{16}$.
 Buffalo, New York and Philadelphia R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{16}$, $\frac{1}{12}$, I. $\frac{1}{16}$.
 Buffalo, Pittsburgh and Western R. R.,—S. $\frac{1}{16}$.
 Buffalo Valley R. R.,—I. $\frac{1}{16}$.
 Burlington and Missouri R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$, I. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{16}$.
 Burlington and Missouri River R. R. of Iowa,—I. $\frac{1}{16}$.
 Burlington and Missouri River R. R. of Nebraska,—I. $\frac{1}{16}$, $\frac{1}{12}$.
 Burlington and North Narrow Gauge R. R.,—I. $\frac{1}{16}$.
 Burns & Noakes,—S. $\frac{1}{16}$.

Cairo and Vincennes R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{16}$, $\frac{1}{12}$, S. $\frac{1}{16}$, $\frac{1}{12}$.
 Calumet and Hecla Mining Co.,—I. $\frac{1}{16}$, $\frac{1}{12}$, S. $\frac{1}{16}$, $\frac{1}{12}$.
 Campbell's Creek Coal Co.,—S. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{16}$.
 Carolina Central R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 Central R. R. of New Jersey,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 Central Pacific R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 Cesna, Daniel,—S. $\frac{1}{16}$.
 Charleston M. & M. Co.,—S. $\frac{1}{16}$.
 Charlotte Furnace Co.,—S. $\frac{1}{16}$.
 Chariers R. R.,—I. $\frac{1}{16}$.
 Chesapeake and Ohio R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{16}$.
 Cheshire R. R.,—S. $\frac{1}{16}$.
 Chicago and Alton R. R.,—I. $\frac{1}{16}$.
 Chicago and Canada Southern R. R.,—I. $\frac{1}{16}$.
 Chicago and Galena Union R. R.,—I. $\frac{1}{16}$.
 Chicago and Michigan Lake Shore R. R.,—I. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{16}$.
 Chicago and Northwestern R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$, I. $\frac{1}{16}$.
 Chicago and Southwestern R. R.,—I. $\frac{1}{16}$, $\frac{1}{12}$.
 Chicago and W. Dummy Co.,—S. $\frac{1}{16}$.
 Chicago, Burlington and Quincy R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$, I. $\frac{1}{16}$.
 Chicago, St. Louis and New Orleans R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{16}$, I. $\frac{1}{16}$.
 Chippewa Lumber & Boom Co.,—S. $\frac{1}{16}$.
 Chippewa Lumber Co.,—S. $\frac{1}{16}$.
 Cincinnati and Eastern R. R.,—S. $\frac{1}{16}$.
 Cincinnati and Springfield R. R.,—I. $\frac{1}{16}$.
 Cincinnati, Hamilton and Dayton R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{16}$, $\frac{1}{12}$, I. $\frac{1}{16}$.
 Cincinnati Northern R. R.,—S. $\frac{1}{16}$.
 Cincinnati Northwestern R. R.,—S. $\frac{1}{16}$, $\frac{1}{12}$.
 Cincinnati, Richmond and Fort Wayne R. R.,—I. $\frac{1}{16}$.
 Cincinnati Southern R. R.,—S. $\frac{1}{16}$.
 Cincinnati, Van Wert and M. C. Con. Co.,—S. $\frac{1}{16}$.
 Clark Mines, (Michigan,)—I. $\frac{1}{16}$.
 Clarksburg, Weston and Greenfield R. R.,—S. $\frac{1}{16}$.
 Cleveland and Pittsburgh R. R.,—S. $\frac{1}{16}$, I. $\frac{1}{16}$, $\frac{1}{12}$.
 Cleveland and Toledo R. R.,—I. $\frac{1}{16}$.
 Cleveland, Columbus and Cincinnati R. R.,—I. $\frac{1}{16}$.
 Cleveland, Columbus, Cincinnati and Indianapolis R. R.,—I. $\frac{1}{16}$.
 Cleveland, Mt. Vernon and Columbus R. R.,—S. $\frac{1}{16}$, I. $\frac{1}{16}$.
 Cleveland, Mt. Vernon and Delaware R. R.,—I. $\frac{1}{16}$.
 Cleveland, Painesville and Ashtabula R. R.,—I. $\frac{1}{16}$, $\frac{1}{12}$.
 Collins, Thos.,—S. $\frac{1}{16}$.
 Columbus and Hocking Valley R. R.,—I. $\frac{1}{16}$.
 Columbus and Indianapolis Central R. R.,—I. $\frac{1}{16}$.
 Columbus, Chicago and Indiana Central R. R.,—I. $\frac{1}{16}$.

E

INDEX FOR "T" RAILS,—RAILROADS OR CONTRACTORS. *Continued.*

Concord R. R.,—S. $\frac{1}{4}$.	Grand Rapids, Newaygo and Lake Shore R. R.,—S. $\frac{1}{4}$.
Conglomerate Mining Co.,—S. $\frac{10}{15}$.	($\frac{4}{5}$ – $\frac{6}{5}$), $\frac{1}{4}$.
Connecticut and Passumpsic R. R.,—S. $\frac{10}{15}$.	Gatwick, Smith & Fryer Lumber Co.,—S. $\frac{1}{4}$.
Conniton Valley R. R.,—S. $\frac{1}{4}$.	Green Bay, Winona and St. Paul R. R.,—S. $\frac{1}{4}$.
Consolidation Coal Co.,—S. $\frac{1}{4}$.	Greenlick Narrow Gauge R. R.,—S. $\frac{1}{4}$.
Cook, D. S.,—S. $\frac{1}{4}$.	Gulf, Colorado and Santa Fe R. R.,—I. $\frac{1}{4}$.
Cowley, Sumner and Fort Scott R. R.,—I. $\frac{1}{4}$.	Hannibal and St. Joseph R. R.,—S. $\frac{1}{4}$.
Cumberland and Pennsylvania R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	Hanover Junction, Hanover and Gettysburg R. R.,—S. $\frac{1}{4}$.
Cumberland Hyd. Cement Co.,—S. $\frac{1}{4}$.	Harris, Wm. A.,—S. $\frac{1}{4}$.
Cumberland Valley R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{4}$.	Hartley & Marshall,—S. $\frac{1}{4}$.
Cunard Mines,—I. $\frac{1}{4}$.	Harry & Friend,—I. $\frac{1}{4}$.
Danville and New River R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$.	Henry, Bayard & Co.,—S. $\frac{1}{4}$, $\frac{1}{4}$.
Detroit and Ironon R. R.,—I. $\frac{1}{4}$.	Herkimer, Newport & Poland R. R.,—S. $\frac{1}{4}$.
Dayton and Michigan R. R.,—I. $\frac{1}{4}$.	Hillside Coal and Iron Co.,—S. $\frac{1}{4}$.
Dayton and Southeastern R. R.,—I. $\frac{1}{4}$.	Hoover, Hughes & Co.,—S. $\frac{1}{4}$.
Dayton and Hudson Canal Co's R. R.,—S. $\frac{1}{4}$.	Horton, Cray & Co.,—S. $\frac{1}{4}$.
Delaware and Hudson Canal R. R.,—S. $\frac{1}{4}$.	Houston St. Ry.,—S. $\frac{1}{4}$.
Delaware, Lackawanna and Western R. R.,—S. $\frac{1}{4}$.	Huntingdon & Broad Top R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.
Delaware, Maryland and Virginia R. R.,—S. $\frac{1}{4}$.	Huntington, C. P.,—S. $\frac{1}{4}$.
Delaware River R. R.,—S. $\frac{1}{4}$.	Illinois and St. Louis Bridge Co.,—S. $\frac{1}{4}$, $\frac{1}{4}$.
Denver and Rio Grande R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$.	Illinois and Southern Iowa R. R.,—I. $\frac{1}{4}$.
Des Moines Railway Construction Co.,—I. $\frac{1}{4}$.	Illinois Central R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.
Detroit and Bay City R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$.	Indianapolis and Cincinnati K. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$.
Detroit, Eel River and Illinois R. R.,—I. $\frac{1}{4}$.	Indianapolis and St. Louis R. R.,—I. $\frac{1}{4}$.
Detroit, Lansing and Lake Michigan R. R.,—I. $\frac{1}{4}$.	Indianapolis, Cincinnati and Lafayette R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$.
Detroit Transit Railway,—I. $\frac{1}{4}$.	International and Great Northern R. R.,—S. $\frac{1}{4}$.
Dubuque and Sioux City R. R.,—I. $\frac{1}{4}$.	International Navigation Co.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.
Dubuque and Dubuque Bridge Co.,—S. $\frac{1}{4}$.	Iron Mountain Co.,—I. $\frac{1}{4}$.
East Broad Top R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	Iron Railway,—S. $\frac{1}{4}$, $\frac{1}{4}$.
East Lexington and Big Sandy R. R.,—S. $\frac{1}{4}$.	Ironton R. R.,—I. $\frac{1}{4}$.
East Tennessee, Virginia and Georgia R. R.,—S. $\frac{1}{4}$.	Isabella Furnace,—S. $\frac{1}{4}$.
Eden Park St. Ry.,—S. $\frac{1}{4}$.	Iselin & Co., A.,—S. $\frac{1}{4}$.
Eel River R. R.,—S. $\frac{1}{4}$.	Jackson & Co., E. E.,—S. $\frac{1}{4}$.
Elizabethtown and Paducah R. R.,—I. $\frac{1}{4}$.	Jacksonville Southeastern R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$.
Erie and Pittsburgh R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{4}$, $\frac{1}{4}$.	Jeffersonville, Madison and Indianapolis R. R.,—S. $\frac{1}{4}$.
Erie Railway,—S. $\frac{1}{4}$, $\frac{1}{4}$.	Johnson & Son, Greenleaf,—S. $\frac{1}{4}$.
European and North American R. R.,—S. $\frac{1}{4}$.	Juniaita Mining Co.,—S. $\frac{1}{4}$.
Everett Iron Co.,—S. $\frac{1}{4}$.	Juniaita Valley Coal Co.,—S. $\frac{1}{4}$.
Everson Knap Co.,—I. $\frac{1}{4}$.	Kansas City and Cameron R. R.,—I. $\frac{1}{4}$.
Fairchance Furnace Co.,—S. $\frac{1}{4}$.	Kansas City Cable Ry.,—S. $\frac{1}{4}$.
Fayette Coke and Furnace Co.,—S. $\frac{1}{4}$.	Kansas City, St. Joseph and Council Bluffs R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$.
Fire Creek Coal and Coke Co.,—S. $\frac{1}{4}$.	Kansas Pacific R. R.,—I. $\frac{1}{4}$.
Fisher, Miller & Co.,—S. $\frac{1}{4}$.	Kans City and Butler R. R.,—S. $\frac{1}{4}$.
Fitchburg R. R.,—S. $\frac{1}{4}$.	Kemble Coal and Iron Company,—I. $\frac{1}{4}$.
Fletcher, Pack & Co.,—S. $\frac{1}{4}$.	Kendell and Eldred R. R.,—I. $\frac{1}{4}$.
Flint and Pere Marquette R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	Kentucky Central R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$.
Fort Dodge and Fort Ridgely R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	Keokuk and Des Moines R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{4}$.
Fort Scott, Southeastern and Memphis R. R.,—S. $\frac{1}{4}$, I. $\frac{1}{4}$.	Keystone Coal Co.,—S. $\frac{1}{4}$.
Fort Wayne, Jackson and Saginaw R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.	Laclede Iron Manufacturing Co.,—I. $\frac{1}{4}$.
Fort Worth St. Ry.,—S. $\frac{1}{4}$.	Ladd, W. S.,—S. $\frac{1}{4}$.
Galena and Southern Wisconsin R. R.,—I. $\frac{1}{4}$.	Lake Angeline Mining Co.,—I. $\frac{1}{4}$.
Galveston City Ry. Co.,—S. $\frac{1}{4}$.	Lake Erie and Western R. R.,—S. $\frac{1}{4}$.
Garden City Mining Co.,—I. $\frac{1}{4}$.	Lake Superior and Mississippi R. R.,—I. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.
Gay Mfg. Co.,—S. $\frac{1}{4}$.	George's Creek and Cumberland R. R.,—S. $\frac{1}{4}$.
George, D. C.,—S. $\frac{1}{4}$.	Gillman, Clinton and Springfield R. R.,—I. $\frac{1}{4}$.
Grand Haven Lumber Co.,—S. $\frac{1}{4}$.	Grand Rapids and Indiana R. R.,—S. $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$.
I. $\frac{1}{4}$.	

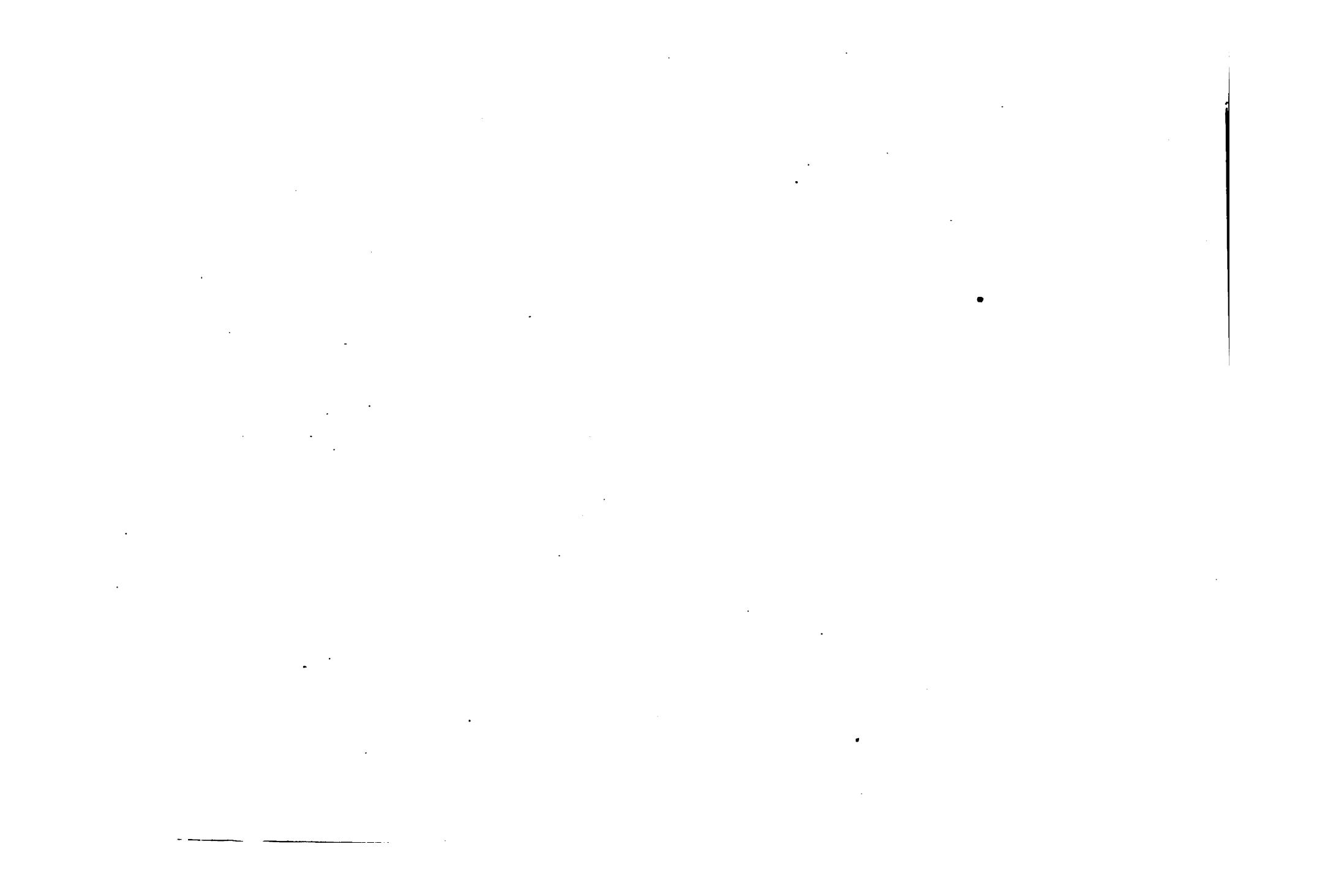


INDEX FOR "T" RAILS,—RAILROADS OR CONTRACTORS. *Continued.*

Lamb, H. N.,—S. $\frac{1}{2}$.
 Land Grant R. R.,—I. $\frac{1}{2}$, $\frac{3}{4}$.
 Lawrence R. R.,—I. $\frac{1}{2}$, $\frac{3}{4}$.
 Leavenworth and Des Moines R. R.,—I. $\frac{1}{2}$, $\frac{1}{4}$.
 Leavenworth, Lawrence and Galveston R. R.,—I. $\frac{1}{2}$, $\frac{1}{4}$.
 Lehigh Valley R. R.,—S. $\frac{1}{2}$ – $\frac{5}{6}$, $\frac{1}{4}$.
 Lexington and Big Sandy R. R.,—S. $\frac{1}{2}$, I. $\frac{1}{2}$.
 Ligonier Valley R. R.,—I. $\frac{1}{2}$, $\frac{3}{4}$, S. $\frac{1}{2}$.
 Lincoln and Northwestern R. R.,—I. $\frac{1}{2}$.
 Little Miami, Columbus and Xenia R. R.,—I. $\frac{1}{2}$.
 Lonias, Forger Bridge Co.,—S. $\frac{1}{2}$.
 Louisville B. and I. Co.,—S. $\frac{1}{2}$.
 Louisville and Frankfort R. R.,—I. $\frac{1}{2}$.
 Louisville and Nashville R. R.,—S. $\frac{1}{2}$, $\frac{3}{4}$, I. $\frac{1}{2}$, $\frac{2}{3}$, S. $\frac{1}{2}$, I. $\frac{1}{2}$.
 Louisville, Cincinnati and Lexington R. R.,—S. $\frac{1}{2}$, I. $\frac{1}{2}$.
 Louisville, New Albany and Chicago R. R.,—S. $\frac{1}{2}$.
 Louisville, Paducah and Southwestern R. R.,—S. $\frac{1}{2}$.
 Lykens Valley Coal Co.,—S. $\frac{1}{2}$, $\frac{1}{2}$.
 Lykens Valley R. R.,—S. $\frac{1}{2}$, $\frac{1}{2}$.
 Lyon, Thos. R.,—S. $\frac{1}{2}$.
 Maine Central R. R.,—S. $\frac{1}{2}$.
 Mapleton Coal Co.,—I. $\frac{1}{2}$.
 Maryland Central R. R.,—S. $\frac{1}{2}$.
 Maryland Union Coal Co.,—S. $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$.
 Memphis and Little Rock R. R.,—S. $\frac{1}{2}$.
 Monongahela and P. Creek Gas Coal Co.,—S. $\frac{1}{2}$.
 Mexican Central R. R.,—S. $\frac{1}{2}$.
 Michigan Southern and Northern Indiana R. R.,—I. $\frac{1}{2}$.
 Midland Construction Co.,—S. $\frac{1}{2}$.
 Mifflin and Centre County R. R.,—I. $\frac{1}{2}$.
 Miller, M. Erskine,—S. $\frac{1}{2}$.
 Miller, Thomas & Co.,—S. $\frac{1}{2}$ – $\frac{5}{6}$, ($\frac{1}{2}$ – $\frac{1}{2}$).
 Mill Springs, Current River and Barnesville R. R.,—S. $\frac{1}{2}$.
 Milwaukee and Northern R. R.,—S. $\frac{1}{2}$.
 Mineral Railroad and Mining Co.,—S. $\frac{1}{2}$, $\frac{1}{2}$.
 Mineral Range R. R.,—S. $\frac{1}{2}$, $\frac{1}{2}$, I. $\frac{1}{2}$.
 Mississippi and Tennessee R. R.,—I. $\frac{1}{2}$, S. $\frac{1}{2}$ – $\frac{5}{6}$.
 Mississippi Central R. R.,—S. $\frac{1}{2}$, $\frac{1}{2}$, I. $\frac{1}{2}$.
 Missouri, Kansas and Texas Railway,—S. $\frac{1}{2}$, ($\frac{1}{2}$ – $\frac{1}{2}$), $\frac{1}{2}$.
 Missouri River, Fort Scott and Gulf R. R.,—I. $\frac{1}{2}$.
 Missouri River, Pacific R. R.,—I. $\frac{1}{2}$.
 Mobile and Montgomery R. R.,—S. $\frac{1}{2}$.
 Moredale Colliery,—I. $\frac{1}{2}$.
 Morley Bros.,—S. $\frac{1}{2}$.
 Morrisdale Coal Co.,—I. $\frac{1}{2}$.
 Moshassuck Valley R. R.,—I. $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$.
 Mount Gilead Short Line R. R.,—I. $\frac{1}{2}$.
 Mount Pleasant and Broad Ford R. R.,—I. $\frac{1}{2}$.
 Mutual Mining and Mfg. Co.,—S. $\frac{1}{2}$.
 McCline & Co.,—S. $\frac{1}{2}$.
 McClure & Co.,—S. $\frac{1}{2}$.
 McFadden & Kelly,—S. $\frac{1}{2}$.
 McGovern, Son & Co., John,—S. $\frac{1}{2}$.
 McLaughlin, P.,—S. $\frac{1}{2}$.
 New Orleans, Jackson and Northern R. R.,—S. $\frac{1}{2}$.
 New Orleans, St. Louis and Chicago R. R.,—I. $\frac{1}{2}$.
 New York Elevated Railway,—S. $\frac{1}{2}$.
 New York, Lake Erie and Western R. R.,—S. $\frac{1}{2}$ – $\frac{5}{6}$.
 New York, New England and W. Invest. Co.,—S. $\frac{1}{2}$.
 New York, Phila. and Norfolk R. R.,—S. $\frac{1}{2}$.
 Norfolk & Western R. R.,—S. $\frac{1}{2}$.
 Northern Central Railway (of Pa.),—S. $\frac{1}{2}$, I. $\frac{1}{2}$.
 Northern Illinois Coal and Iron Co.,—I. $\frac{1}{2}$.
 Northern Pacific R. R.,—I. $\frac{1}{2}$.
 Northern R. R. (of N. H.),—S. $\frac{1}{2}$, $\frac{1}{2}$.
 Northwestern Railway,—I. $\frac{1}{2}$.
 Northwest Mining & Exchange Co.,—S. $\frac{1}{2}$.

Ohio and Mississippi R. R.,—I. $\frac{1}{2}$, S. $\frac{1}{2}$.
 Ohio Central Railway,—I. $\frac{1}{2}$.
 Ohio Southern R. R.,—S. $\frac{1}{2}$.
 Oil City and Chicago R. R.,—S. $\frac{1}{2}$.
 Oil Creek and Allegheny Valley R. R.,—S. $\frac{1}{2}$, I. $\frac{1}{2}$.
 Old Colony R. R.,—S. $\frac{1}{2}$, $\frac{1}{2}$.
 Olean and Salamanca R. R.,—S. $\frac{1}{2}$.
 Olean, Bradford and Warren R. R.,—I. $\frac{1}{2}$, $\frac{1}{2}$.
 Omaha and Northwestern R. R.,—I. $\frac{1}{2}$.
 Pacific Improvement Co.,—S. $\frac{1}{2}$.
 Pacific R. R.,—I. $\frac{1}{2}$.
 Pacific R. R. of Mo.,—I. $\frac{1}{2}$.
 Pacific Railway Improvement Co.,—I. $\frac{1}{2}$.
 Palmer, Nichols & Co.,—S. $\frac{1}{2}$.
 Parker and Kans City R. R.,—S. $\frac{1}{2}$.
 Patomac Coal Co.,—S. $\frac{1}{2}$.
 Peachbottom R. R.,—S. $\frac{1}{2}$.
 Penn Gas Coal Co's R. R.,—S. $\frac{1}{2}$.
 Pennsylvania Co.,—S. $\frac{1}{2}$.
 Pennsylvania R. R.,—I. $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, S. $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$.
 Pensacola and Perdido R. R.,—S. $\frac{1}{2}$.
 Peoria, Pekin and Jacksonville R. R.,—S. $\frac{1}{2}$.
 Peters, R. G.,—S. $\frac{1}{2}$.
 Phelps, Willis,—I. $\frac{1}{2}$.
 Philadelphia and Erie R. R.,—S. $\frac{1}{2}$, $\frac{1}{2}$, I. $\frac{1}{2}$, $\frac{1}{2}$.
 Philadelphia, Wilmington and Baltimore R. R.,—S. $\frac{1}{2}$ – $\frac{1}{2}$.
 Pittsburgh,—I. $\frac{1}{2}$.
 Phoenix Copper Co.,—I. $\frac{1}{2}$, $\frac{1}{2}$.
 Piper & Co., W. H.,—S. $\frac{1}{2}$.
 Pittsburgh and Connellsville R. R.,—I. $\frac{1}{2}$, $\frac{1}{2}$.
 Pittsburgh and Lake Erie Line I. C.,—S. $\frac{1}{2}$.
 Pittsburgh, Castle Shannon and Washington R. R.,—I. $\frac{1}{2}$.
 Pittsburgh, Cincinnati and St. Louis Railway,—S. $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, I. $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$.
 Pittsburgh, Cincinnati and St. Louis Railway, C. and M. V. Division,—I. $\frac{1}{2}$.
 Pittsburgh, Fort Wayne and Chicago R. R.,—S. $\frac{1}{2}$, $\frac{1}{2}$.
 Pittsburgh Southern R. R.,—I. $\frac{1}{2}$, $\frac{1}{2}$.
 Pittsburgh, Tioga and Charlestown R. R.,—I. $\frac{1}{2}$, $\frac{1}{2}$.
 Pittsburgh, Virginia and Kentucky R. R.,—I. $\frac{1}{2}$.
 Pittsburgh, Wheeling and Oxford R. R.,—I. $\frac{1}{2}$.
 Pontiac, Oxford and Port Austin R. R.,—S. $\frac{1}{2}$.
 Port Huron and Northwest R. R.,—S. $\frac{1}{2}$.
 Preston Coal Co.,—I. $\frac{1}{2}$.
 Pueblo and Arkansas Valley R. R.,—I. $\frac{1}{2}$.

Nashville, Chattanooga and St. Louis R. R.,—S. $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$.
 Natchez, Jackson and Columbus R. R.,—I. $\frac{1}{2}$.
 New Castle and Beaver Valley R. R.,—I. $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$.
 New England, Fairmount & W. G. C. Co.,—S. $\frac{1}{2}$.
 New Mexico and Southern Pacific R. R.,—I. $\frac{1}{2}$.



INDEX FOR "T" RAILS.—RAILROADS OR CONTRACTORS. Concluded.

Quincy Mining Co.,—I. $\frac{1}{4}$.	Terre Haute and Indianapolis R. R.,—S. $\frac{1}{2}$, I. $\frac{1}{2}$. Texas and Pacific Railway,—S. $\frac{1}{2}$, I. $\frac{1}{2}$.
Raleigh and Gaston R. R.,—S. $\frac{1}{2}$.	Texas and St. Louis R. R.,—S. $\frac{1}{2}$.
Rich Hill R. R.,—I. $\frac{1}{4}$.	Thompson, Ashburner & Co.,—S. $\frac{1}{2}$.
Richmond and Danville R. R.,—I. $\frac{1}{2}$, $\frac{1}{4}$.	Tionesta Valley R. R.,—S. $\frac{1}{2}$.
Rio Grande Extension Co.,—S. $\frac{1}{2}$.	Toledo and Woodville R. R.,—S. $\frac{1}{2}$.
Rochester and Pittsburgh R. R.,—S. $\frac{1}{2}$.	Toledo, Peoria and Warsaw R. R.,—I. $\frac{1}{2}$.
Roscommon Lumber Co.,—S. $\frac{1}{2}$.	Tuckererton R. R.,—S. $\frac{1}{2}$.
St. Joseph and Denver City R. R.,—I. $\frac{1}{4}$.	Union Depot Co.,—S. $\frac{1}{2}$, $\frac{1}{4}$.
St. Louis, Alton and Terre Haute R. R.,—S. $\frac{1}{2}$, $\frac{1}{4}$, I. $\frac{1}{2}$.	Union Pacific R. R., (Eastern Division),—I. $\frac{1}{2}$.
St. Louis and Iron Mountain R. R.,—See St. L., I. M. & So.	Union Pacific R. R., (Main Line),—I. $\frac{1}{2}$.
St. Louis and Pacific R. R.,—I. $\frac{1}{4}$.	Uniontown and Connellsville R. R.,—I. $\frac{1}{2}$.
St. Louis Coal Ry.,—S. $\frac{1}{2}$.	United Coal and Coke Co.,—S. $\frac{1}{2}$.
St. Louis, Iron Mountain & Southern R. R.,—I. $\frac{1}{2}$, $\frac{1}{4}$, S. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{2}$.	Valley R. R.,—S. $\frac{1}{2}$.
St. Louis, Kansas and Arizona R. R.,—S. $\frac{1}{2}$.	Virginia and Truckee R. R.,—S. $\frac{1}{2}$.
St. Louis, Salem and Little Rock R. R.,—I. $\frac{1}{4}$.	Wabash Railway,—S. $\frac{1}{2}$.
St. Louis, Vandalia and Terre Haute R. R.,—I. $\frac{1}{2}$, $\frac{1}{4}$.	Walters, W. T.,—S. $\frac{1}{2}$.
St. Paul and Pacific R. R., (1st Division),—S. $\frac{1}{2}$, $\frac{1}{4}$.	Warsaw City R. R.,—I. $\frac{1}{2}$.
St. Paul and Sioux City R. R.,—I. $\frac{1}{2}$.	Washington City, Virginia Midland and Great Southern R. R.,—I. $\frac{1}{2}$.
St. Paul, Min. & Manitoba R. R.,—S. $\frac{1}{2}$, $\frac{1}{4}$.	West Chester and Philadelphia R. R.,—S. $\frac{1}{2}$.
Salisbury R. R.,—I. $\frac{1}{4}$.	Western and Atlantic R. R.,—S. $\frac{1}{2}$.
Salisbury Coal Co.,—S. $\frac{1}{2}$.	Western Maryland R. R.,—S. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{2}$.
Schmertz & Co., R. E.,—S. $\frac{1}{2}$.	West Jersey R. R.,—S. $\frac{1}{2}$, I. $\frac{1}{2}$.
Seabord and Roanoke R. R.,—S. $\frac{1}{2}$.	Westmoreland Coal Co.,—I. $\frac{1}{2}$.
Selby & Co., Thos. H.,—S. $\frac{1}{2}$.	West Virginia Cent. and Pittsburgh R. R.,—S. $\frac{1}{2}$.
Shafton Coal Co.,—I. $\frac{1}{2}$.	Wheeler & Dusenbury,—S. $\frac{1}{2}$.
Sharpsville R. R.,—I. $\frac{1}{2}$, $\frac{1}{4}$.	Wheeling and Elm Grove R. R.,—S. $\frac{1}{2}$.
Sharpsville and Oakland R. R.,—I. $\frac{1}{2}$.	Whitehead & Co.,—S. $\frac{1}{2}$.
Shenango and Allegheny Valley R. R.,—S. $\frac{1}{2}$, I. $\frac{1}{2}$.	Williams & Co., Frank, —S. $\frac{1}{2}$.
Shields & Dorwin,—S. $\frac{1}{2}$.	Wilmington and Northern R. R.,—S. $\frac{1}{2}$.
Silver Lake R. R.,—S. $\frac{1}{2}$.	Wilmington and Weldon R. R.,—S. $\frac{1}{2}$.
Sioux City and Pacific R. R.,—I. $\frac{1}{2}$.	Wilson & Co., R. T.,—S. $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{2}$.
Southern Kansas and Western R. R.,—I. $\frac{1}{2}$.	Wing, G. L. & D. E.,—S. $\frac{1}{2}$, $\frac{1}{2}$.
South Fork Coal Co.,—I. $\frac{1}{2}$.	Winona and St. Peters R. R.,—I. $\frac{1}{2}$.
Springfield and New London R. R.,—S. $\frac{1}{2}$, I. $\frac{1}{2}$.	Wisconsin Central R. R.,—I. $\frac{1}{2}$.
Springfield, Athol and Northeastern R. R.,—I. $\frac{1}{2}$.	Wood & Son, John A.,—S. $\frac{1}{2}$.
Springfield, Jackson and Pomroy R. R.,—I. $\frac{1}{2}$.	Worcester and Schrewsbury R. R.,—S. $\frac{1}{2}$.
Springfield Southern R. R.,—S. $\frac{1}{2}$.	Wright & Tower,—I. $\frac{1}{2}$.
State Lumber Co.,—S. $\frac{1}{2}$.	Yale & Towne Mfg. Co.,—S. $\frac{1}{2}$, $\frac{1}{2}$.
Stephens & Co., Henry,—S. $\frac{1}{2}$.	Youngstown R. R.,—S. $\frac{1}{2}$, $\frac{1}{2}$.
Steubenville and Indiana R. R.,—I. $\frac{1}{2}$.	Youngstown and Connott Valley R. R.,—S. $\frac{1}{2}$.
Summit Branch R. R.,—S. $\frac{1}{2}$, $\frac{1}{2}$.	

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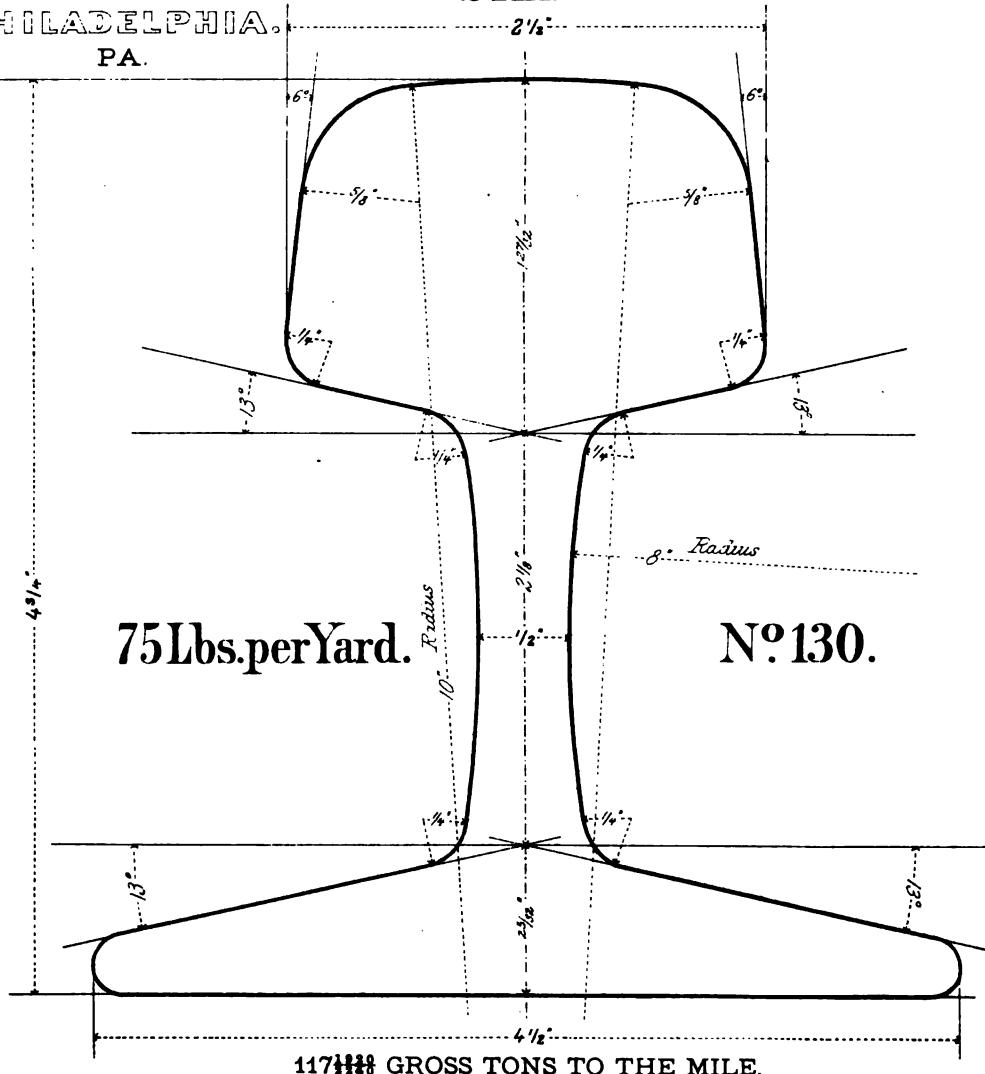
PA.

STEEL.

Wt. **75**
No. **130**

75 LBS. No. 130.

Pennsylvania R. R., Main Line, 1885.



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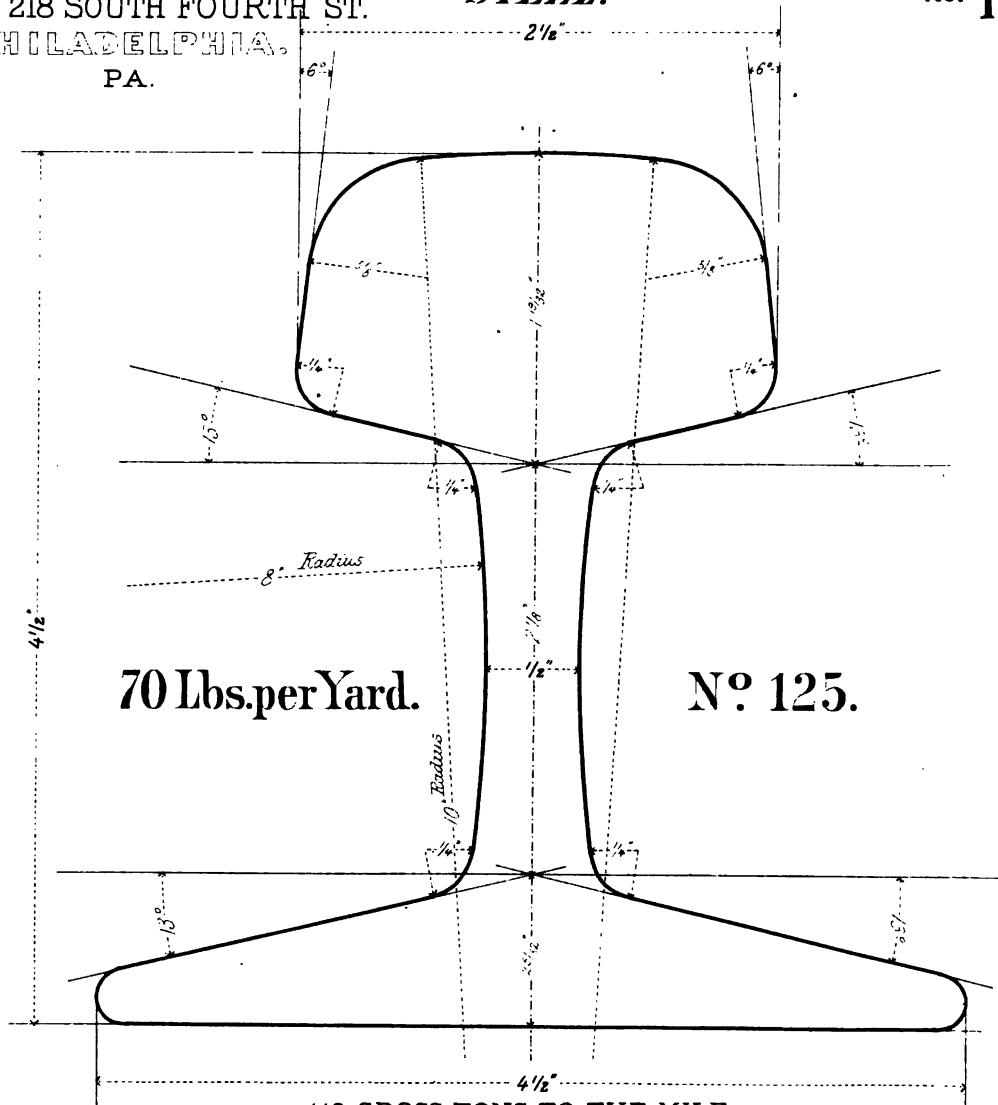
PA.

STEEL.

Wt. **70**
No. **125**

70 LBS. No. 125.

Pennsylvania R. R., Principal Branches, 1885.



110 GROSS TONS TO THE MILE.

102.400 NET TONS TO THE MILE.

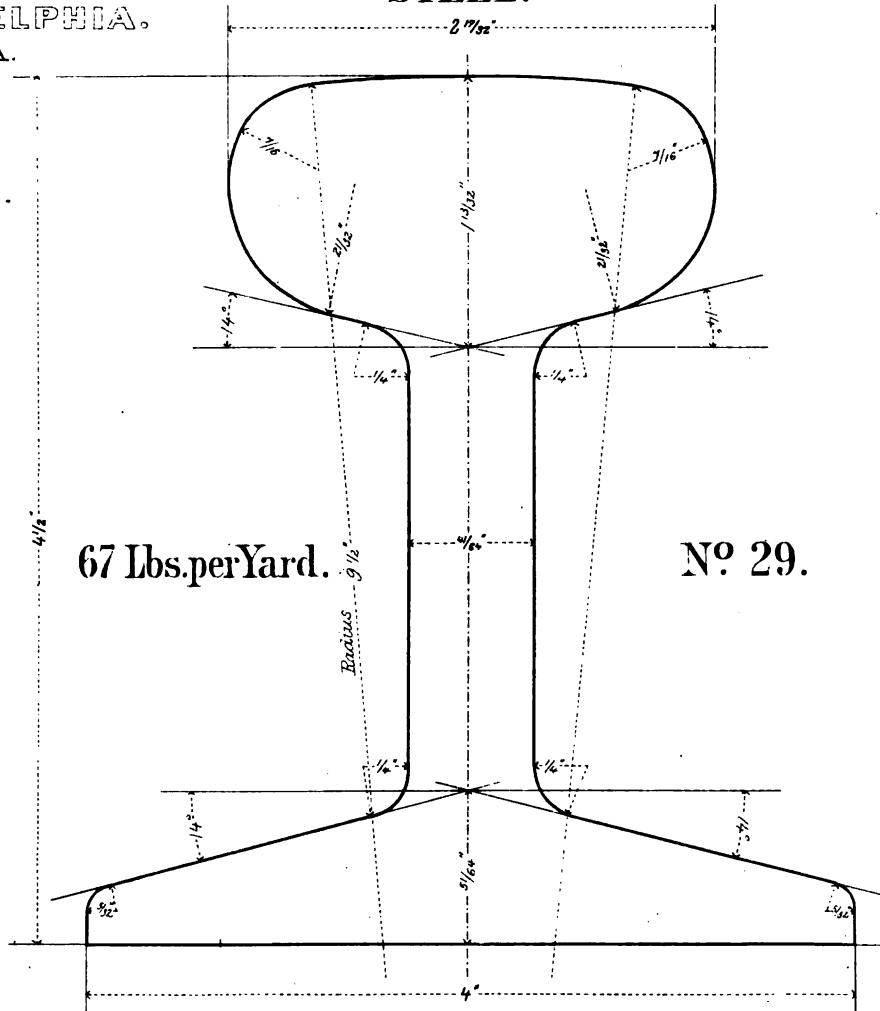


CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

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PHILADELPHIA.
PA.

Wt. **67**
No. **29**

STEEL.



67 LBS. No. 29.

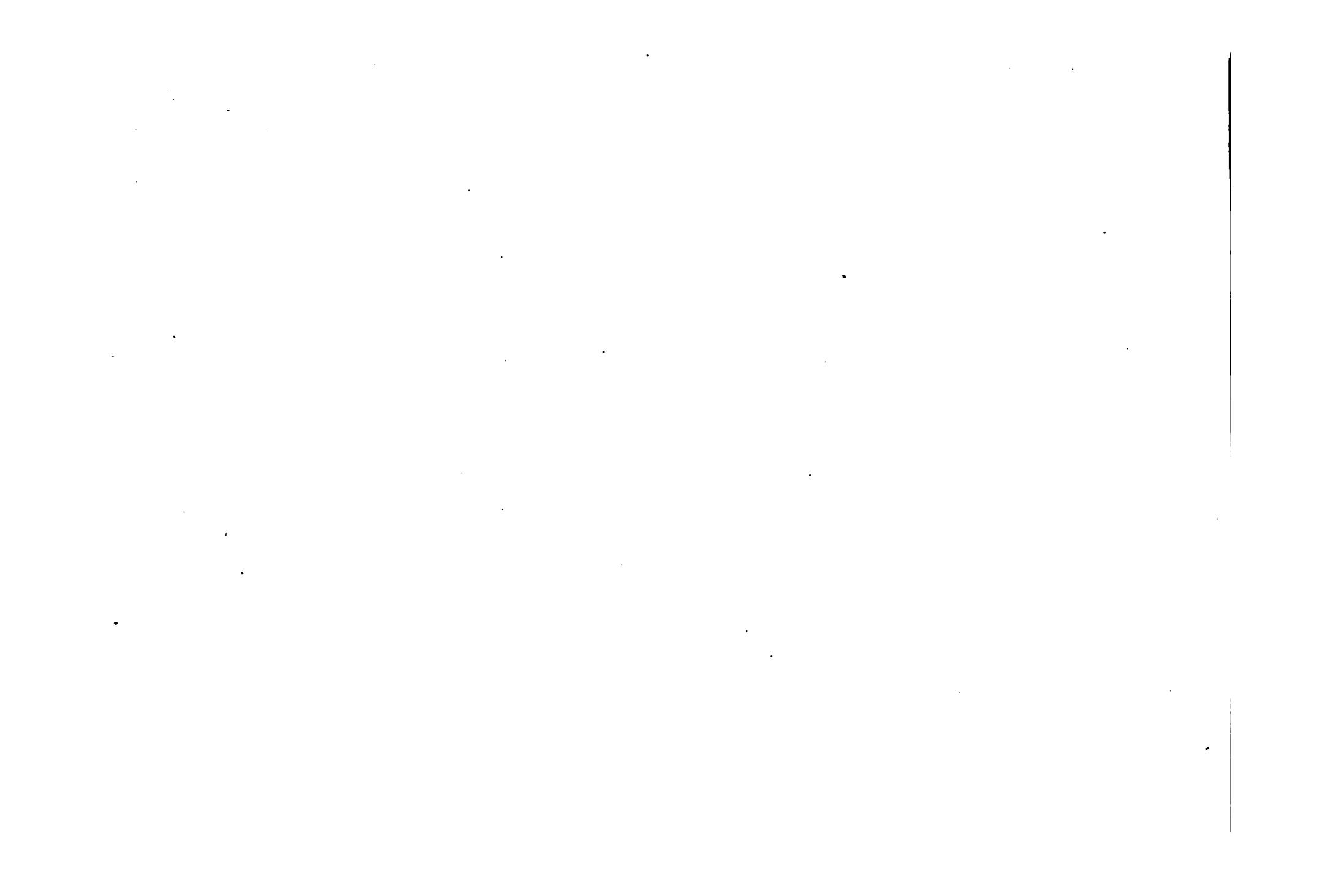
Pennsylvania R. R., 1870-75. See 67, No. 55.

Pittsburgh, Cincinnati and St. Louis Ry., 1874.

See 60. No. 56.

Illinois and St. Louis Bridge Co., 1874. See 67, No. 55.

105¹¹/₁₂ GROSS TONS TO THE MILE.
117¹¹/₁₂ NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

wt. **67**
No. **55**

67 LBS. No. 55.

Pennsylvania R. R., Main Line, 1884.

See 75, No. 130.

Illinois and St. Louis Bridge Co., 1877.

Cumberland and Pennsylvania R. R., 1877-79.

Also 60, No. 56, and 56, No. 73.

Baltimore and Ohio R. R., 1881-83.

Also 60, No. 56.

Pittsburgh, Cincinnati and St. Louis R. R., 1881.

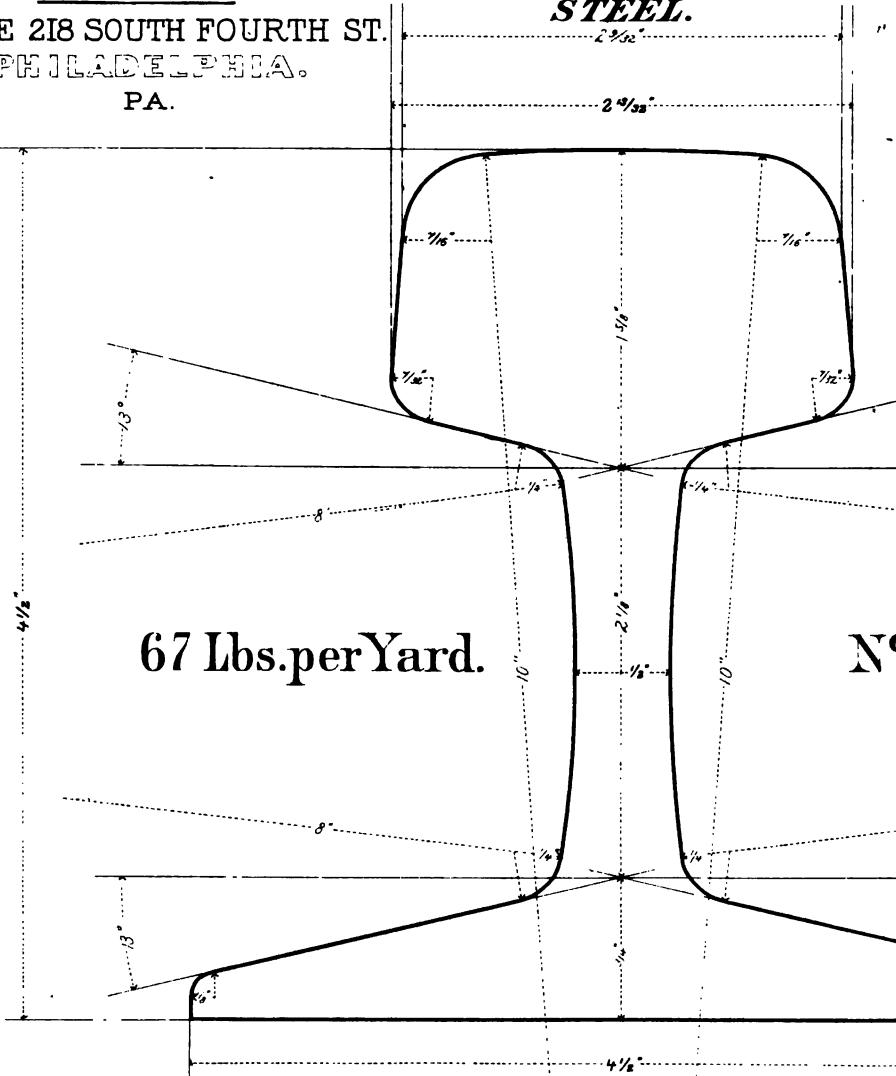
Also 60, No. 56.

Huntingdon and Broad Top R. R., 1884.

Buffalo, N. Y. and P. R. R. Co., 1881-83.

George's Creek and Cumberland R. R., 1881.

STEEL.



105¹¹/₁₂ GROSS TONS TO THE MILE.

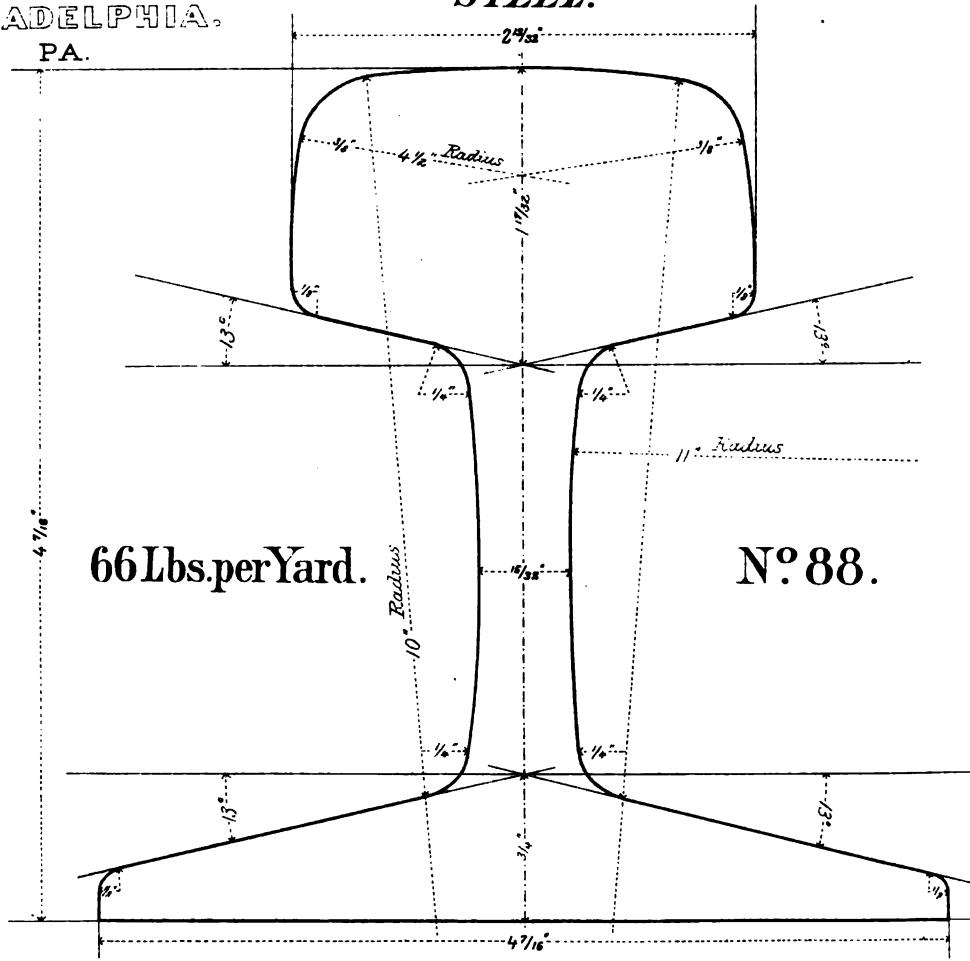
CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

Wt. **66**
No. **88**

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PHILADELPHIA.

PA.

STEEL.



66 LBS. No. 88.

Chicago, Burlington and Quincy R. R., Main Line, 1881-82.

66 Lbs. per Yard.

Nº 88.

103 $\frac{11}{16}$ GROSS TONS TO THE MILE.

116 $\frac{11}{16}$ NET TONS TO THE MILE.



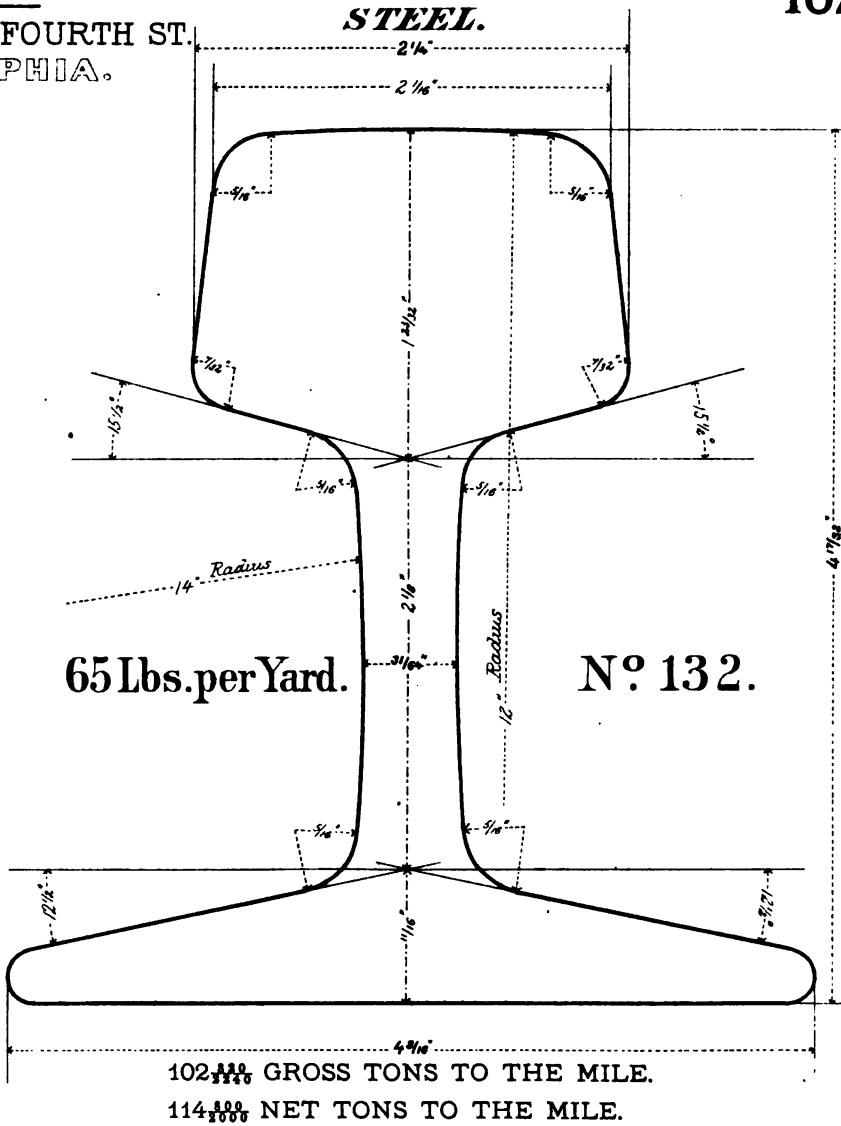
CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

Wt. 65
No. 132

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

65 LBS. No. 132.

Cleveland, Columbus, Cincinnati and Indianapolis
R. R. Co., 1885.



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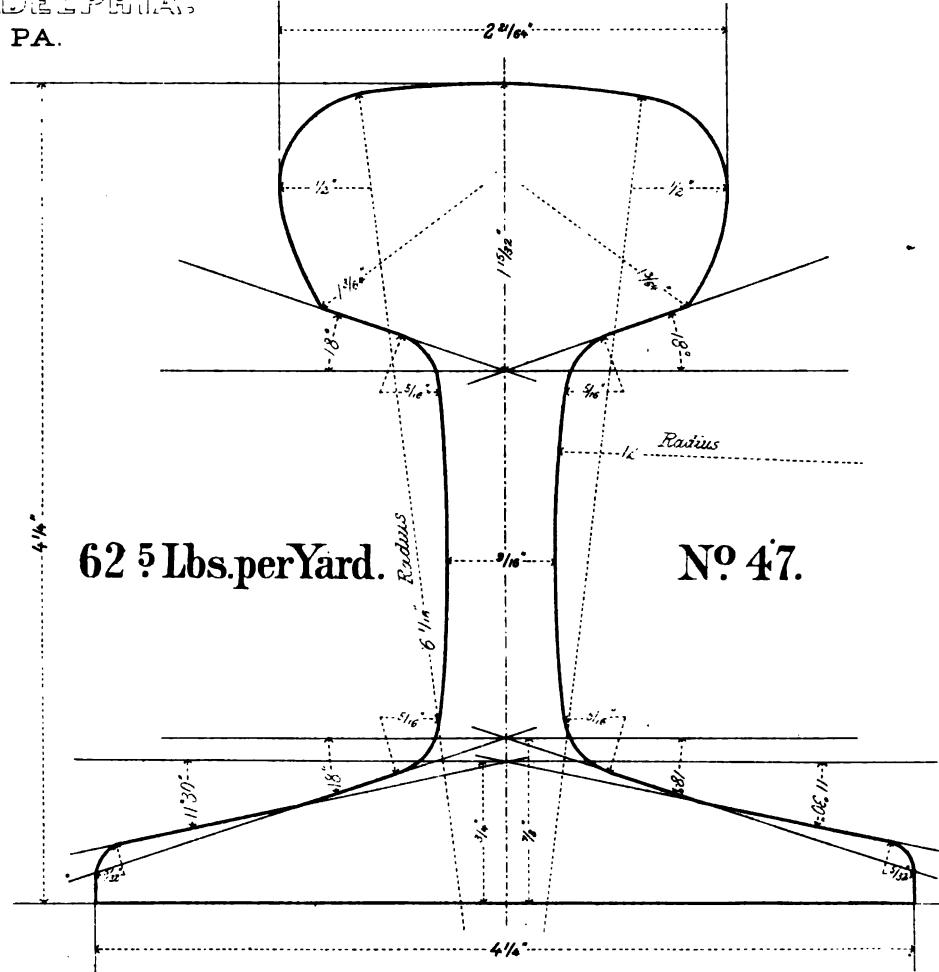
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PHILADELPHIA.

PA.

wt. 62⁵
No. 47

STEEL.



62.5 LBS. No. 47.

Central R. R. of New Jersey, 1874.

62 5 Lbs.perYard.

Nº 47.

98¹¹/₁₆ GROSS TONS TO THE MILE.
110 NET TONS TO THE MILE.



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PHILADELPHIA.

PA.

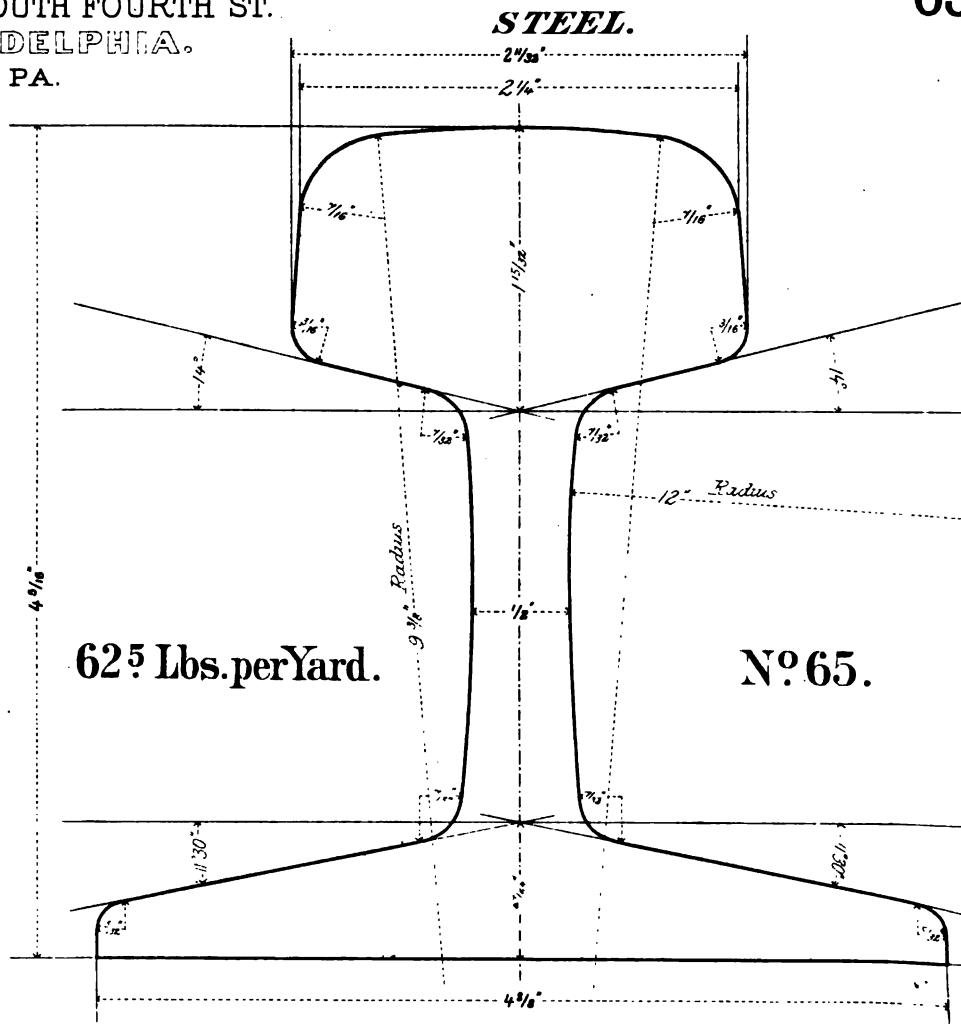
Wt. 62⁵
No. 65

62.5 LBS. No. 65.

Erie Railway. 1875-76. (Changed to N.Y., L.E. & W.R.R.)

Lehigh Valley R.R., 1876. See 58, No. 68.

New York, Lake Erie and Western R.R., (63 lbs.) 1878.



62⁵ Lbs.perYard.

Nº 65.

98.44 GROSS TONS TO THE MILE.

110 NET TONS TO THE MILE.



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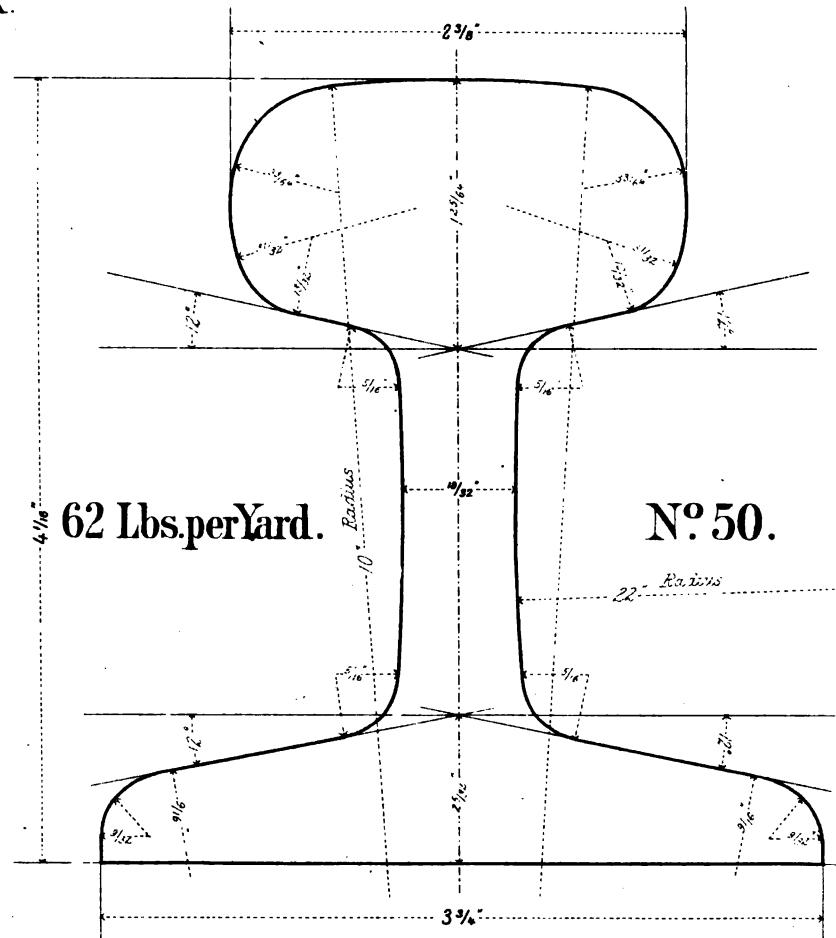
PA.

Wt. 62
No. 50

STEEL.

62 LBS. No 50.

Delaware and Hudson Canal Co's R. R., 1875.



97 $\frac{11}{16}$ GROSS TONS TO THE MILE.
109 $\frac{11}{16}$ NET TONS TO THE MILE.

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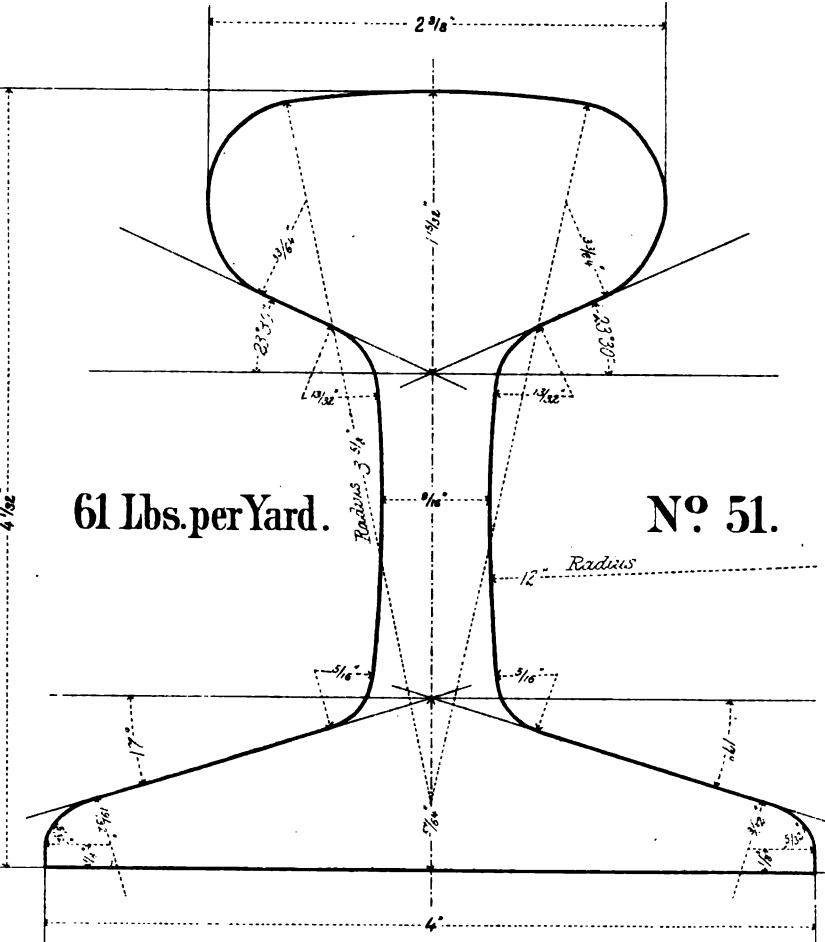
PA.

wt. 61
No. 51

STEEL.

61 LBS. No. 51.

Delaware, Lackawanna and Western R. R., 1874.



61 Lbs.per Yard.

Nº 51.

95~~44~~ GROSS TONS TO THE MILE.
107~~44~~ NET TONS TO THE MILE.

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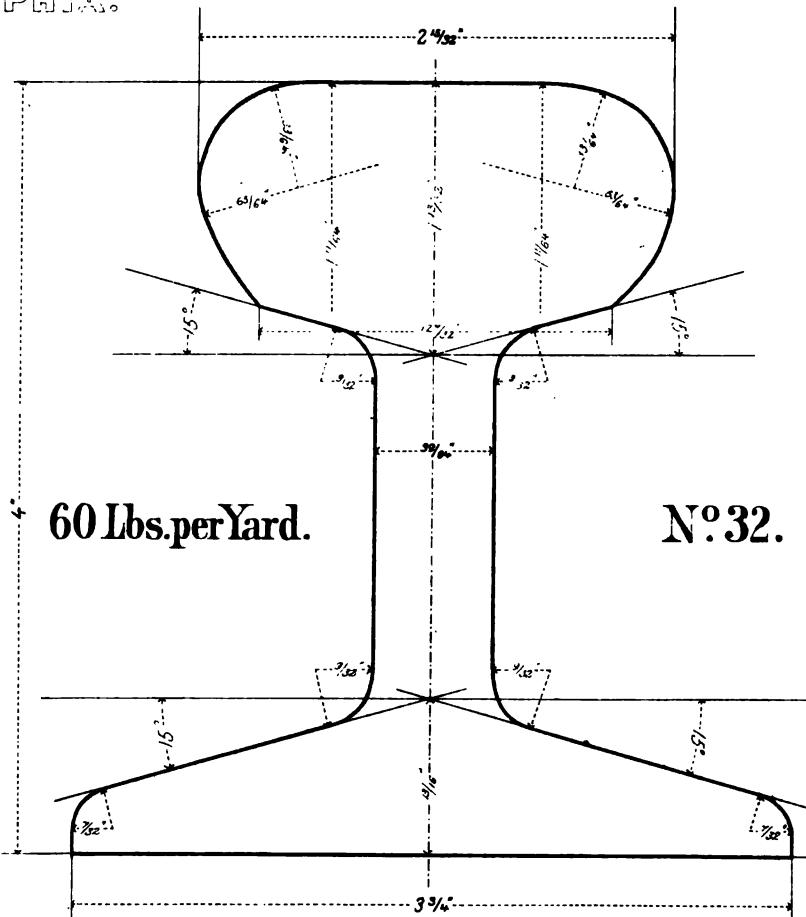
PA.

Wt. 60
No. 32

60 LBS. No. 32.

Indianapolis, Cincinnati and Lafayette R. R., 1870. See 56, No. 52.
Hannibal and St. Joseph R. R., 1870.
Michigan Central R. R., 1872.
Chicago, Burlington and Quincy R. R., 1868-78.
 See 47, No. 86; 56, No. 82; 66, No. 88.
Philadelphia and Erie R. R., 1875. See 60, No. 56.
Allegheny Valley R. R., 1874-75. See 60, No. 56.
Louisville and Nashville R. R., 1873-75. See 58, No. 54.
Huntingdon and Broad Top R. R., 1872-76. See 60, No. 56.
Boston, Lowell and Nashua R. R., 1876.
Burlington & Missouri River R. R., 1868. See 47, No. 86, & 56, No. 82.
Peoria, Pekin and Jacksonville R. R., 1876.
Pittsburgh, Cincinnati and St. Louis R. R., 1874.
 See 60, No. 56; 67, No. 55.
Penn Gas Coal Company's R. R., 1875.
Pittsburgh, Fort Wayne and Chicago R. R., 1874. See 60, No. 56.
Jeffersonville, Madison and Indianapolis R. R., 1877.
Lexington and Big Sandy R. R., See 60, No. 56.
St. Louis and Iron Mountain R. R., 1873. See 60, No. 56.
 (Changed to St. L. I. M. & S. R. R.)
Buffalo, New York and Philadelphia R. R., 1880-83.
Oil Creek and Allegheny River Ry., 1875. Also 60, No. 9.
Youghiogheny R. R., 1877.

STEEL.



94^{11/16} GROSS TONS TO THE MILE.

105^{11/16} NET TONS TO THE MILE.

1

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

Wt. 60
No. 38

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

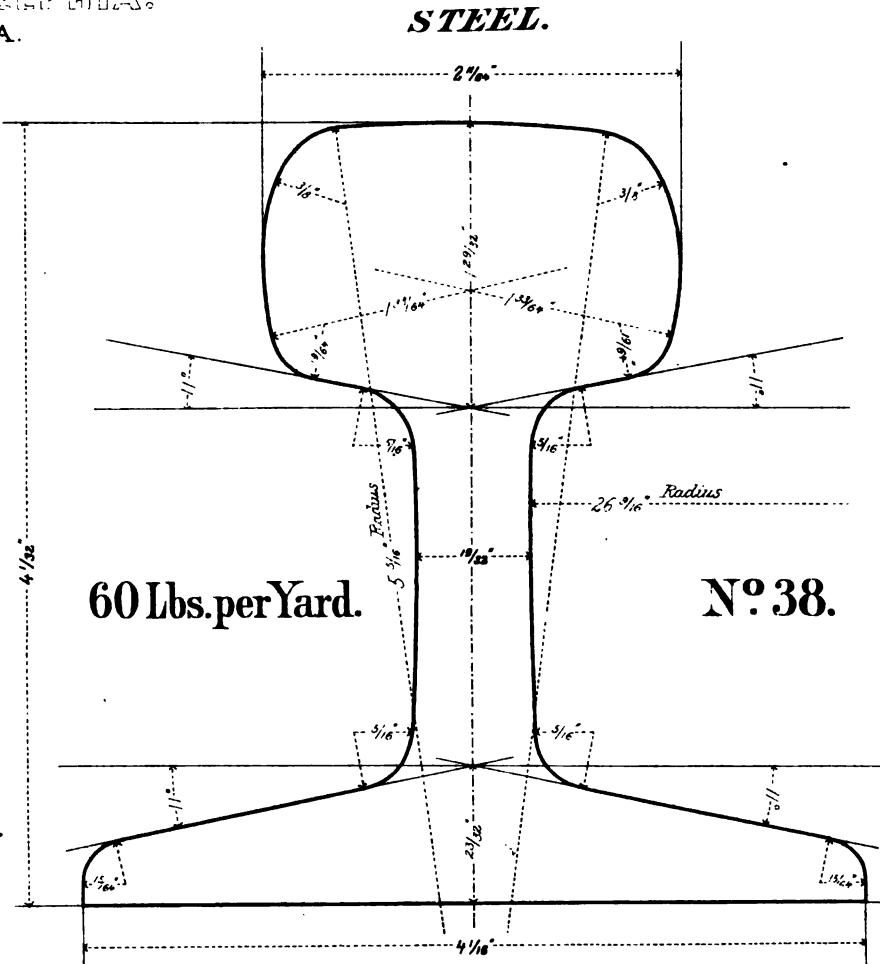
60 LBS. No. 38.

Chesapeake and Ohio R. R., 1872. See 60, No. 60.

Boston and Providence R. R., 1874.

Virginia and Truckee R. R., 1874.

Buffalo and Jamestown R. R., 1876.



94⁴⁴/₁₁ GROSS TONS TO THE MILE.
105⁴⁴/₁₁ NET TONS TO THE MILE.

BAMBERIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

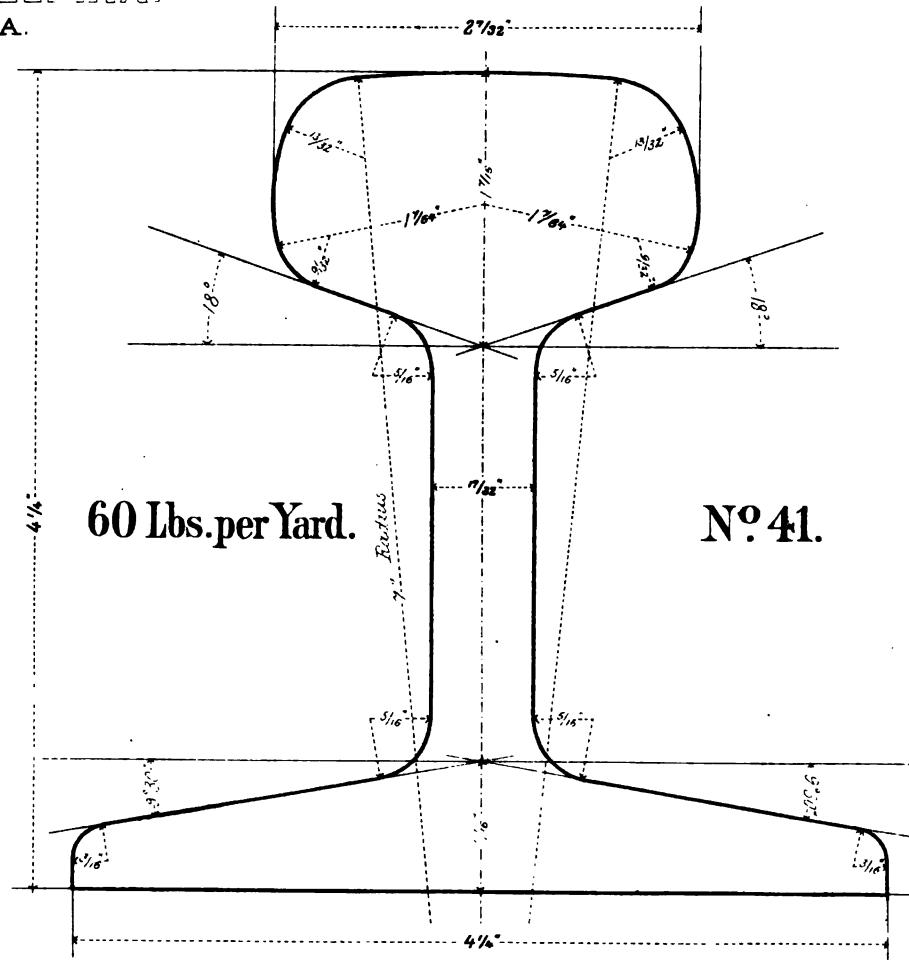
Wt. 60
No. 41

OFFICE 218 SOUTH FOURTH ST.

PHILADELPHIA.

PA.

STEEL.



60 LBS. No. 41.

Chicago and Northwestern R. R., 1874. See 60, No. 77.

Central Pacific R. R., 1874. See 50, No. 60.

Keokuk and Des Moines R. R., 1874.

94¹¹/₁₂ GROSS TONS TO THE MILE.
105¹¹/₁₂ NET TONS TO THE MILE.

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

Wt. 60
No. 49

60 LBS. No. 49.

Illinois Central R. R., 1877. See 60, No. 56.

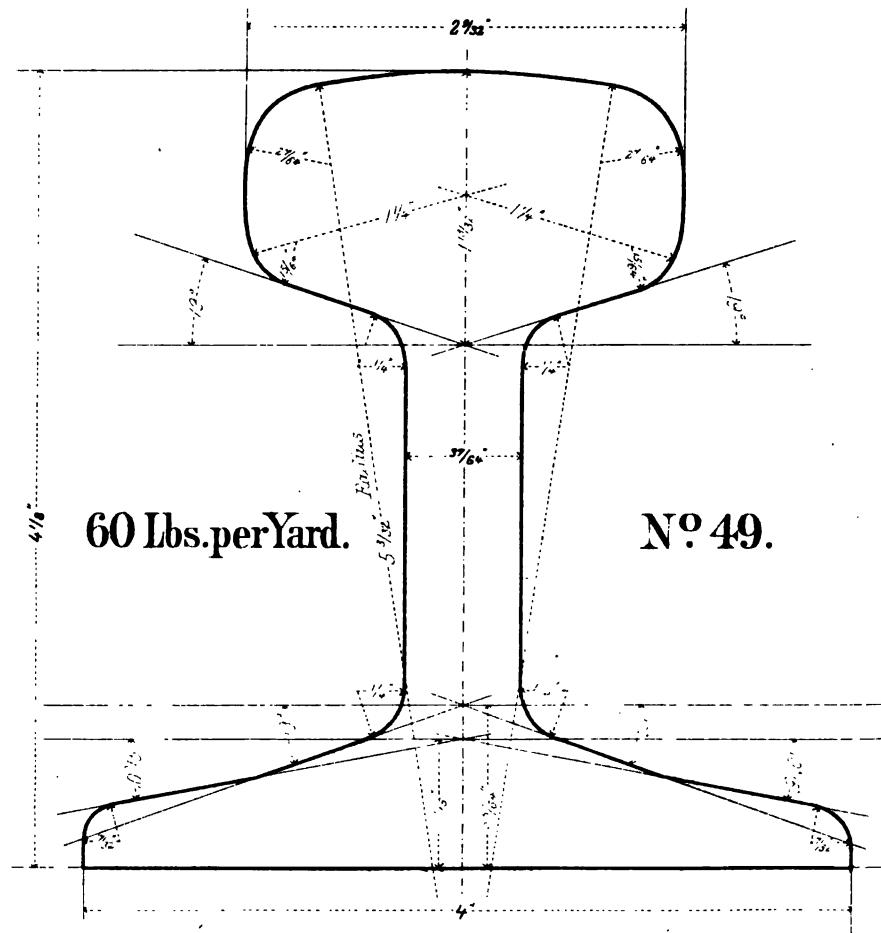
Cincinnati, Hamilton and Dayton R. R., 1875.

See 60, No. 59.

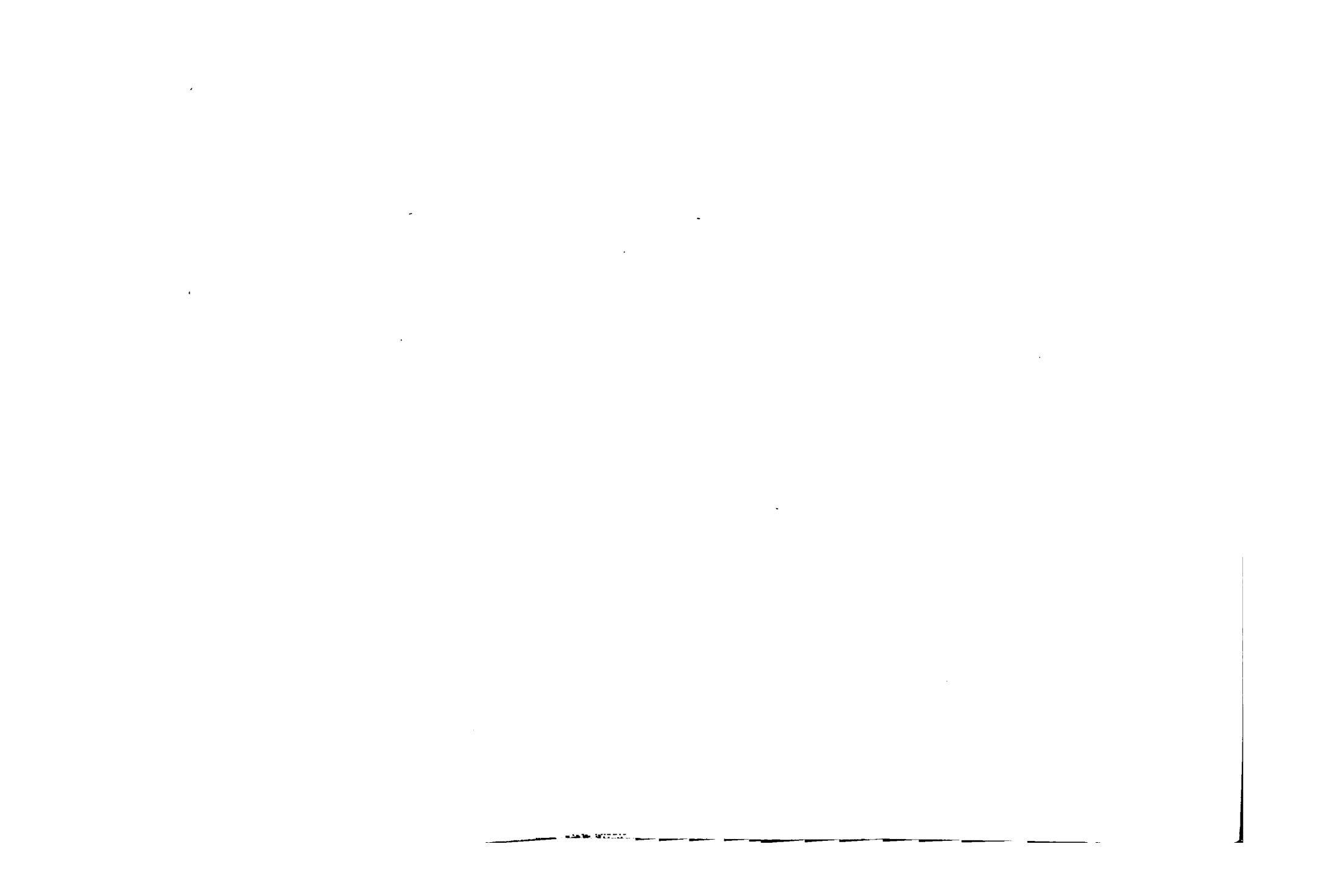
St. Louis, Alton & Terre Haute R. R., 1876. See 60, No. 56.

Grand Rapids and Indiana R. R., 1875-76. See 56, No. 73.

STEEL.



94¹¹¹/₁₀₀ GROSS TONS TO THE MILE.
105¹¹¹/₁₀₀ NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

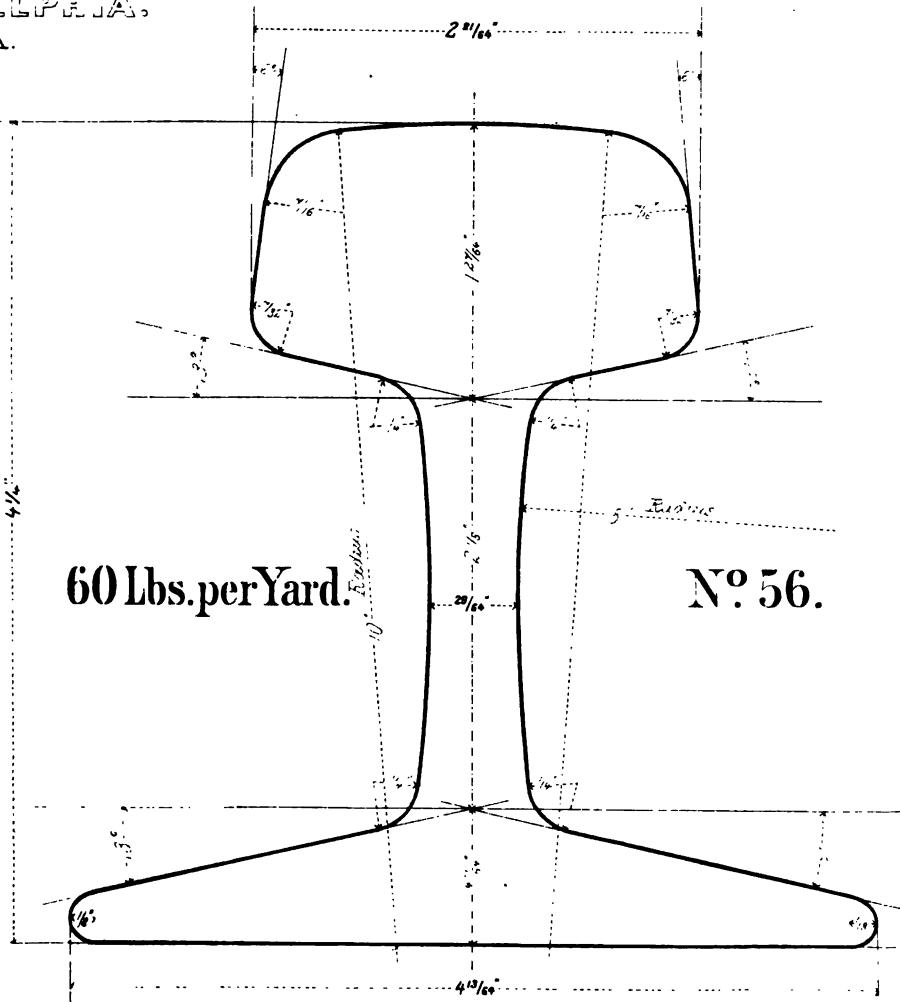
Wt. 60
No. 56

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

STEEL.

60 LBS. No. 56.

<i>Ohio and Mississippi R. R., 1881—84.</i>	<i>West Jersey R. R., 1880.</i>
<i>A. Iselin & Co., 1884.</i>	<i>Illinois Central R. R., 1877.</i>
<i>Henry Bayard & Co., 1884.</i>	<i>Springfield Southern R. R., 1881.</i>
<i>Campbell's Creek Coal Co., 1884.</i>	<i>Baltimore and Potomac R. R., 1876.</i>
<i>Allegheny Valley R. R., 1879.</i>	<i>Iron Railway Co., 1884.</i>
<i>Cleveland and Pittsburgh R. R., 1877.</i>	<i>Midland Construction Co., 1883—84.</i>
<i>Northern Central Ry., (Penna.) 1877.</i>	<i>Delaware River R. R., 1882—83.</i>
<i>Bellefonte and Snow Shoe R. R., 1880.</i>	<i>Pennsylvania Co., 1883.</i>
<i>Erie and Pittsburgh R. R., 1878.</i>	<i>Western Maryland R. R., 1883.</i>
<i>Summit Branch R. R., 1876.</i>	<i>Cincinnati Southern Ry., 1882.</i>
<i>Philadelphia and Erie R. R., 1879.</i>	<i>Kentucky Central Ry., 1881.</i>
<i>Toledo and Woodville R. R., 1877.</i>	<i>Bowers, Brown & Co., 1882.</i>
<i>New York, Philadelphia and Norfolk R. R., 1884.</i>	
<i>Pennsylvania R. R., (Leased Lines and Branches,) 1881—83—84. See 70, No. 125.</i>	
<i>Pittsburgh, Ft. Wayne and Chicago R. R., 1881. Also 67, No. 55.</i>	
<i>Pittsburgh, Cincinnati and St. Louis R. R., 1881—82.</i>	
<i>Terre Haute and Indianapolis R. R., 1878—83.</i>	
<i>Louisville, Paducah and South Western R. R., 1875.</i>	
<i>Dunleith and Dubuque Bridge Co., 1880—84.</i>	
<i>St. Louis, Alton and Terre Haute R. R., 1879—84.</i>	
<i>Huntingdon and Broad Top R. R., 1879—82.</i>	
<i>Oumberland and Penna. R. R., 1880—84. Also 56, No. 73.</i>	
<i>St. Louis, Iron Mountain and Southern R. R., 1880—81.</i>	
<i>Baltimore and Ohio R. R., 1881—82—83. Also 67, No. 55.</i>	
<i>Rochester and Pittsburgh R. R., 1881—84.</i>	
<i>Cincinnati Northwestern R. R., 1884.</i>	
<i>Lomas Forger Bridge Co., 1882.</i>	



94¹¹¹/₃₃₃ GROSS TONS TO THE MILE.
105¹¹¹/₃₃₃ NET TONS TO THE MILE.

1

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.

PHILADELPHIA.

PA

STEEL.

60 LBS. No. 59.

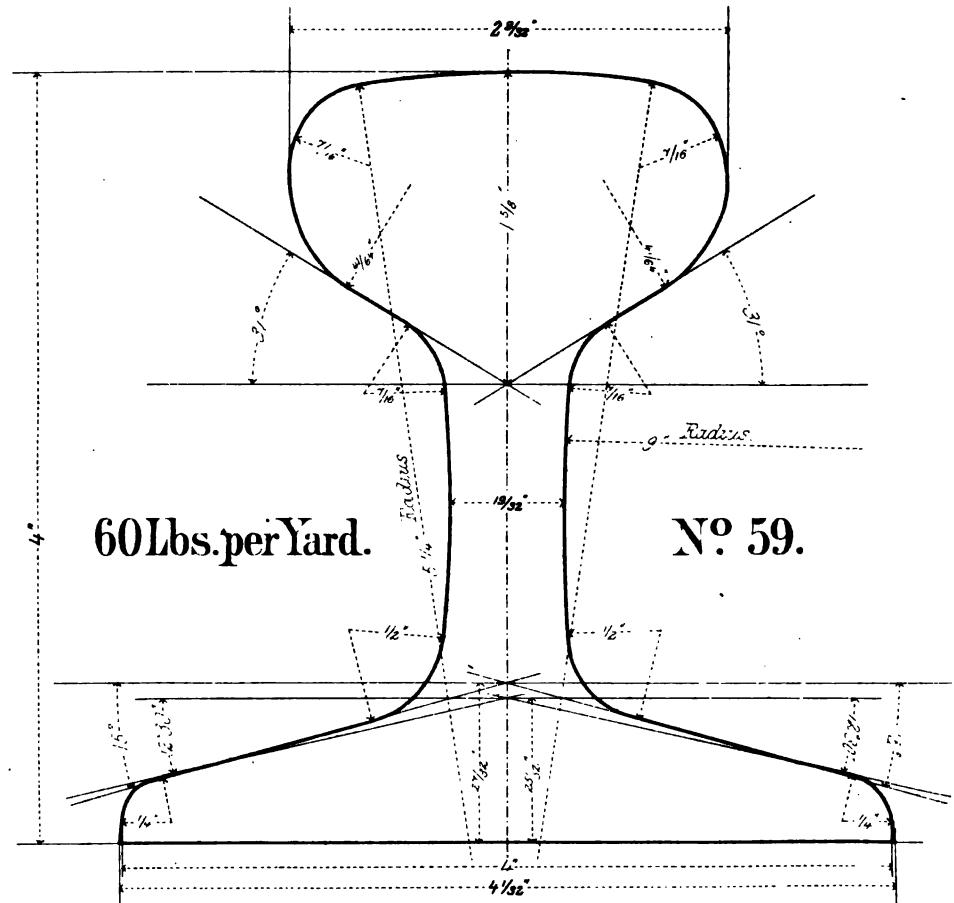
Fitchburg R. R., 1875.

Cheshire R. R., 1875.

Boston, Lowell and Nashua R. R., 1875-76.

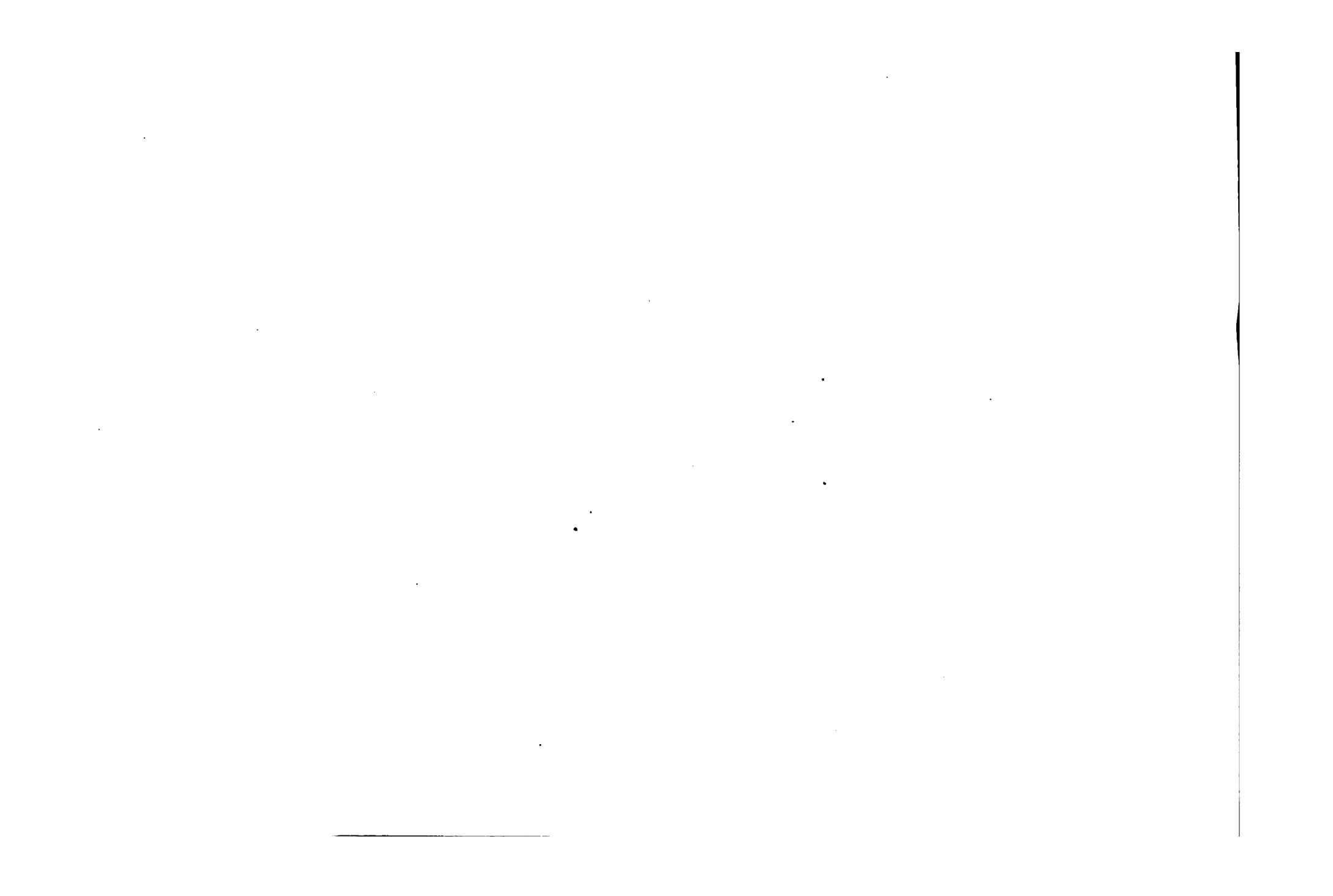
See 60, No. 32.

Cincinnati, Hamilton and Dayton R. R., 1878.



94.44 GROSS TONS TO THE MILE.

~~105~~ NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.

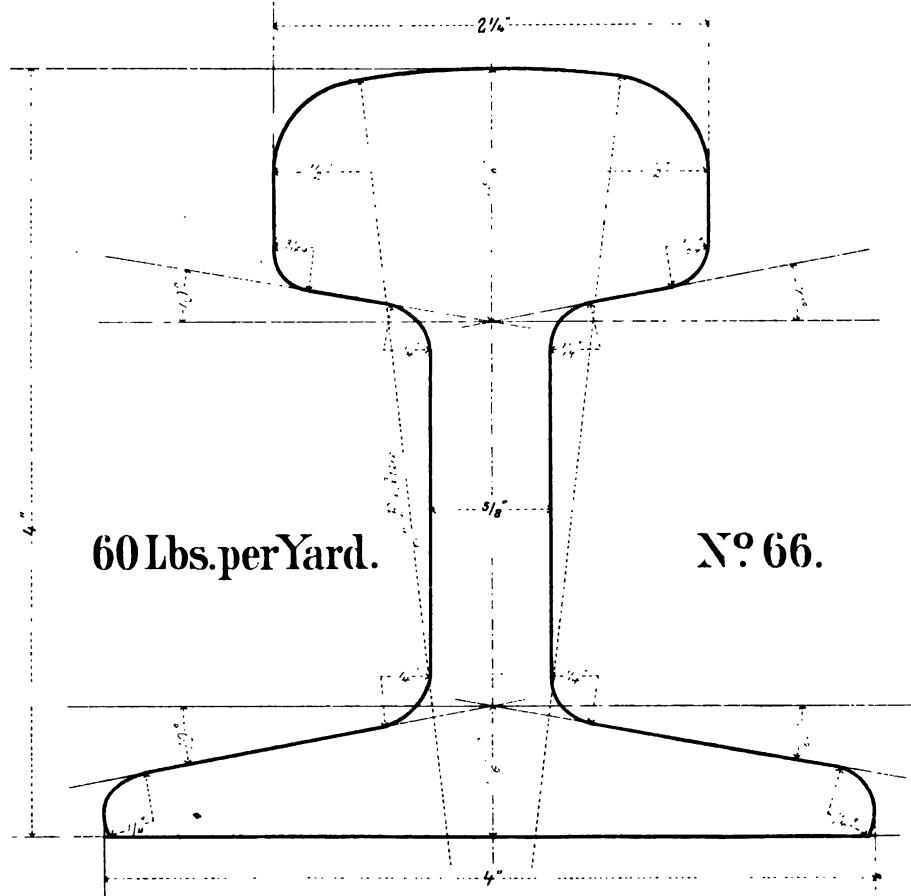
PHILADELPHIA,
PA.

Wt. 60
No. 66

STEEL.

60 LBS. No. 66.

Maine Central R. R.. 1878.



60 Lbs.perYard.

Nº 66.

94~~111~~ GROSS TONS TO THE MILE.
105~~111~~ NET TONS TO THE MILE.

1

2

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.

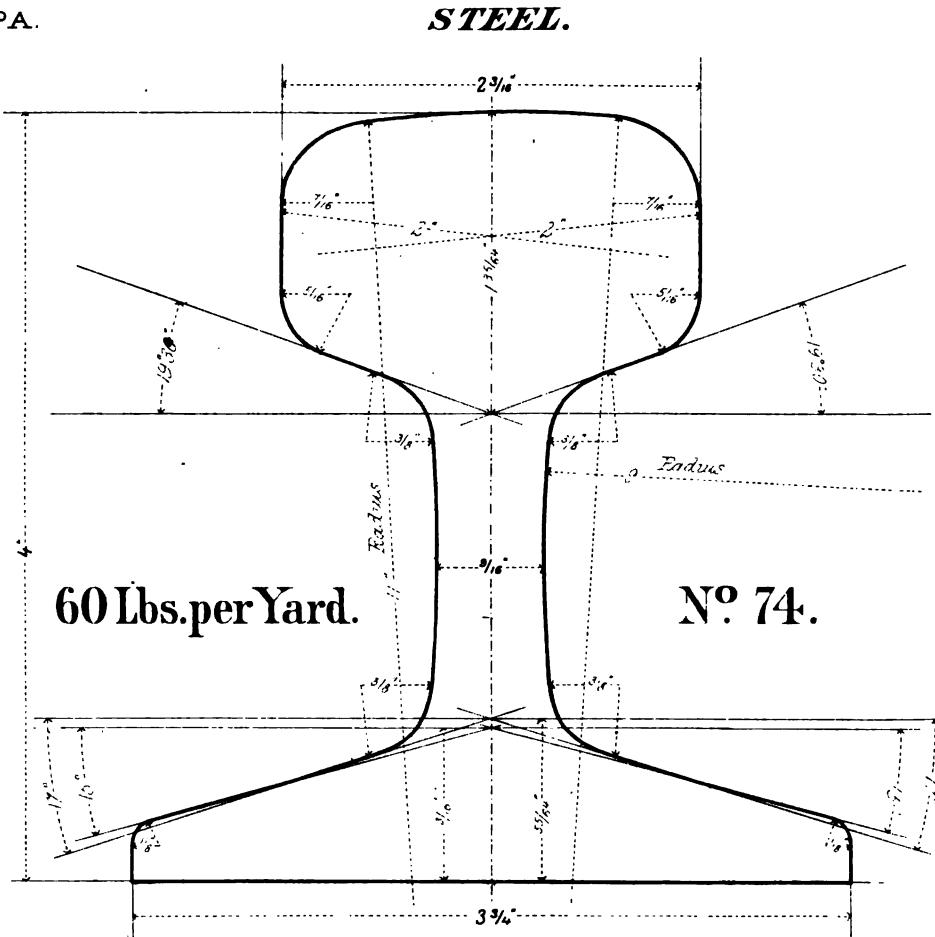
PHILADELPHIA.

PA.

Wt. 60
No. 74

60 LBS. No. 74.

Chicago, Milwaukee and St. Paul Ry., 1877.



94¹¹¹/₁₀₀₀ GROSS TONS TO THE MILE.

105¹¹¹/₁₀₀₀ NET TONS TO THE MILE.



PAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

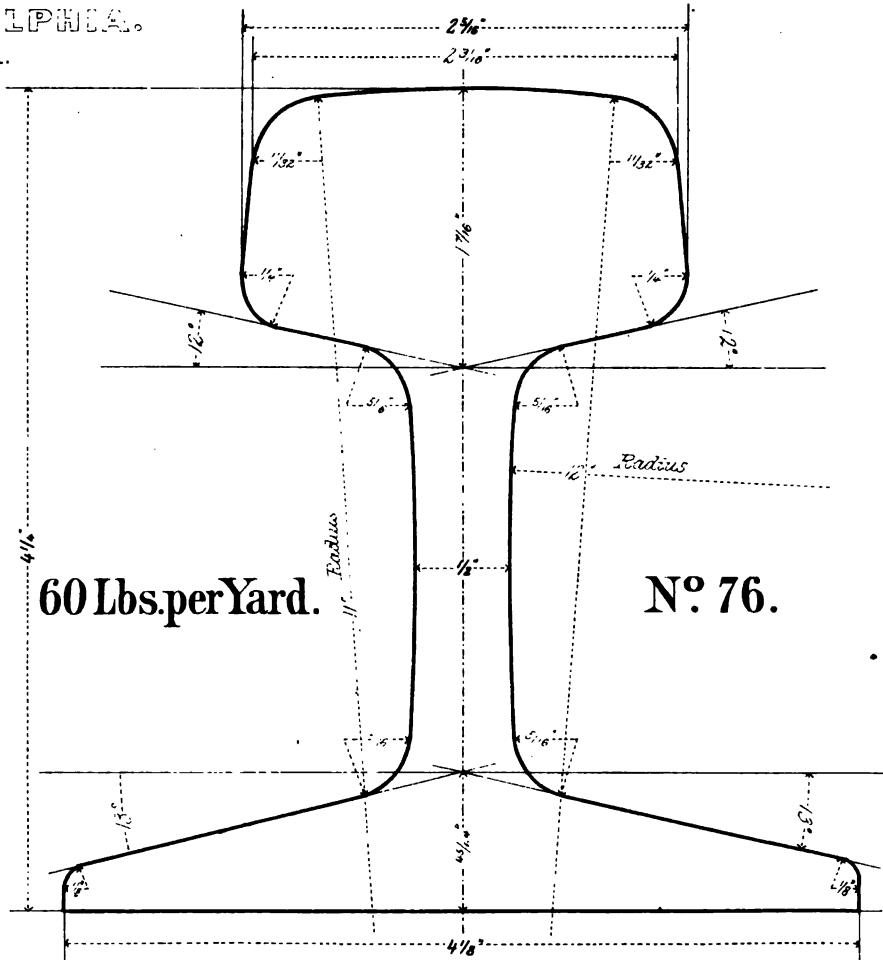
Wt. 60
No. 76

OFFICE 218 SOUTH FOURTH ST.

PHILADELPHIA.

PA.

STEEL.



94¹¹¹/₁₁₁ GROSS TONS TO THE MILE.

105¹¹¹/₁₁₁ NET TONS TO THE MILE.

60 LBS. No. 76.

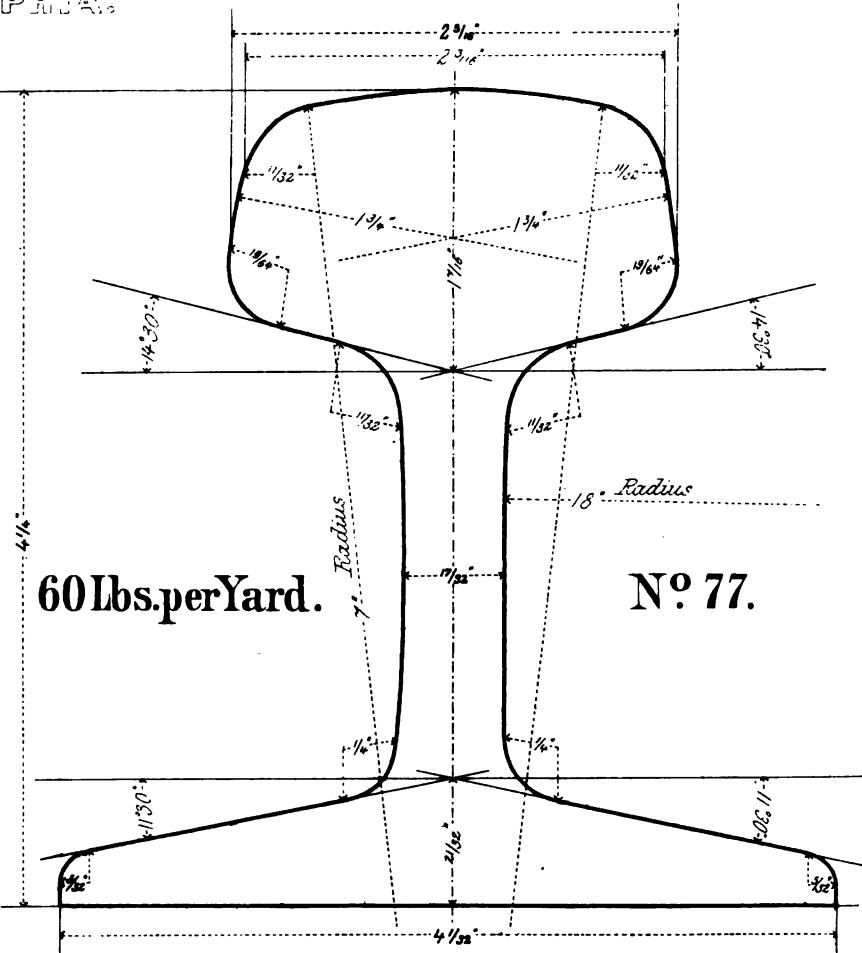
Lake Shore and Michigan Southern Ry., 1877.

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA,
PA.

Wt. **60**
No. **77**

STEEL.



60 LBS. No. 77.

Chicago and Northwestern Ry., 1879.

Bellefonte and Snow Shoe R. R., 1879. See 60, No. 56.

60 Lbs. per Yard.

Nº 77.

94¹¹/₁₆ GROSS TONS TO THE MILE.

105¹¹/₁₆ NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

Wt. **60**
No. **95**

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

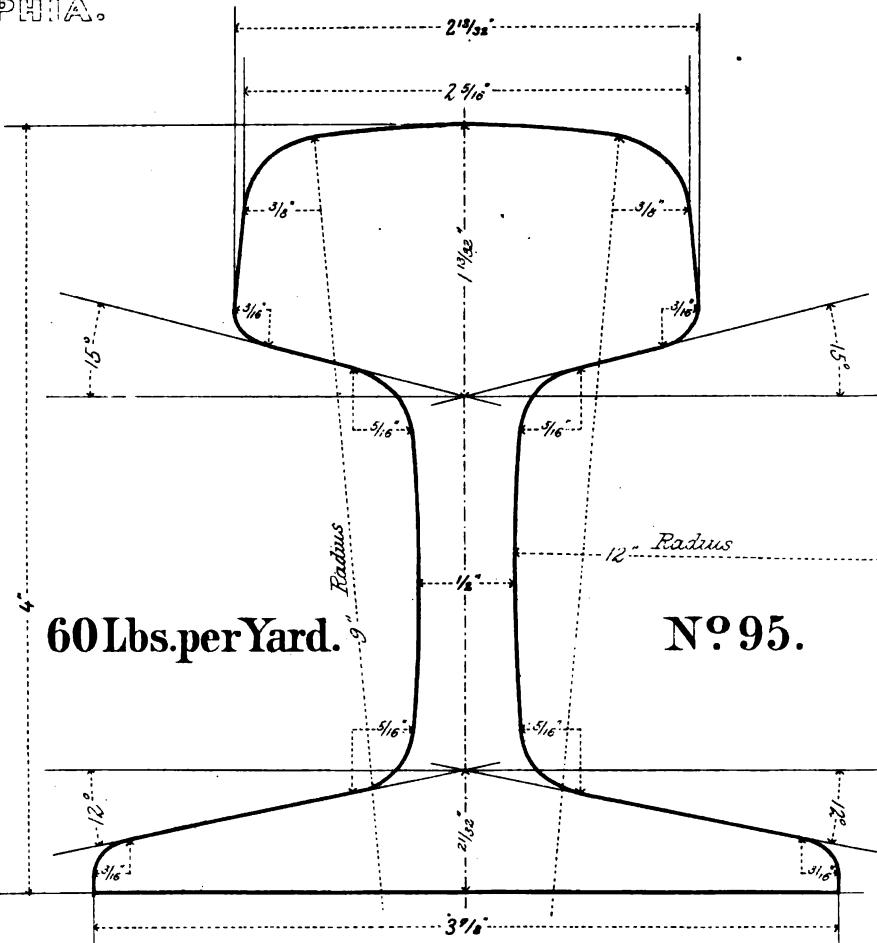
60 LBS. No. 95.

Ind., Bloomington and West'n R. R., 1882.

Dayton and Ironton R. R., 1885.

Ohio Southern R. R., 1882.

STEEL.



94~~111~~ GROSS TONS TO THE MILE.

105~~111~~ NET TONS TO THE MILE.

—

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST. **STEEL.**

PHILADELPHIA.

PA.

Wt. **60**
No. **99**

60 LBS. No. 99.

Cin., New Orleans and Texas Pacific R. R., 1883.

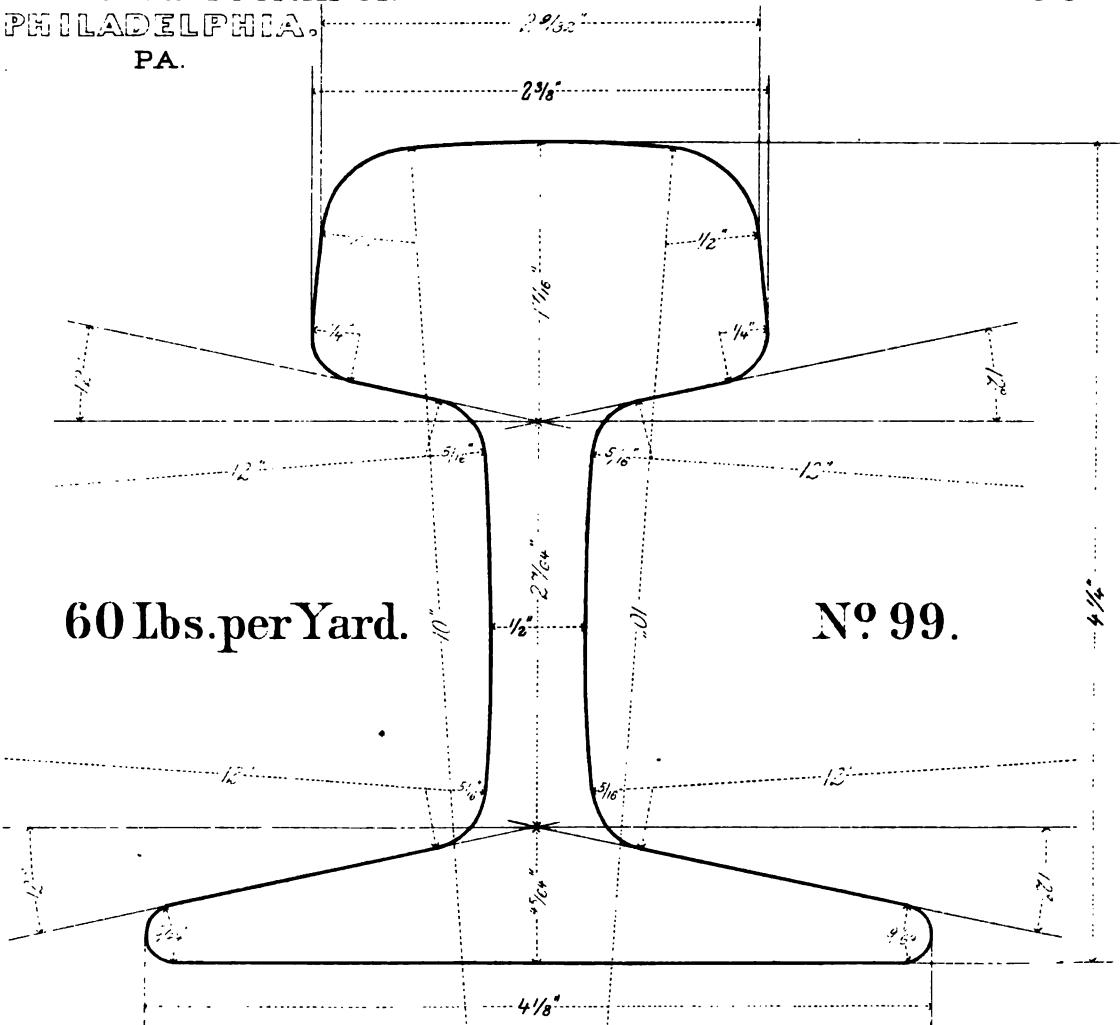
Alabama and Great Southern, 1883-84.

Iron Railway Co., 1884.

Vicksburg, Shreveport and Pacific Ry., 1884.

60 Lbs. per Yard.

Nº 99.



94¹¹¹/₁₀₀ GROSS TONS TO THE MILE.

105¹¹¹/₁₀₀ NET TONS TO THE MILE.

1

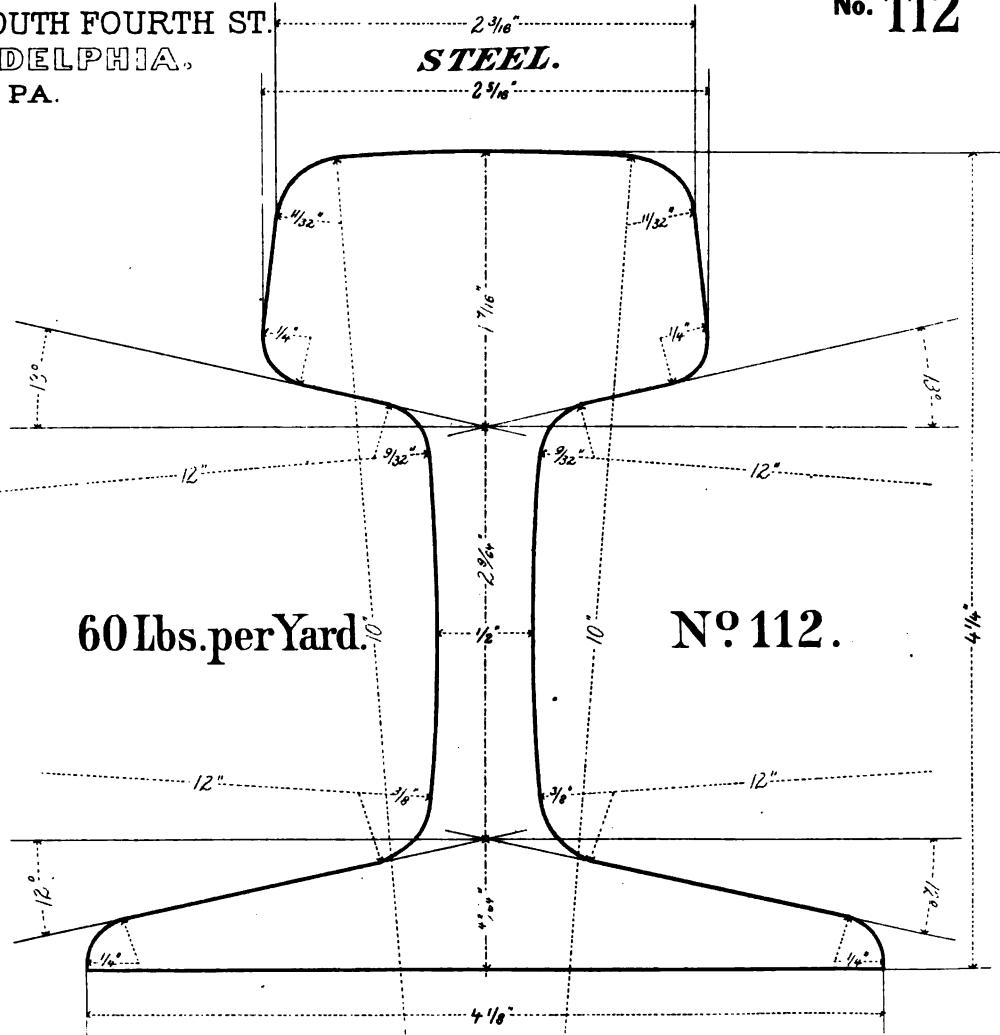
CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

Wt. 60
No. 112

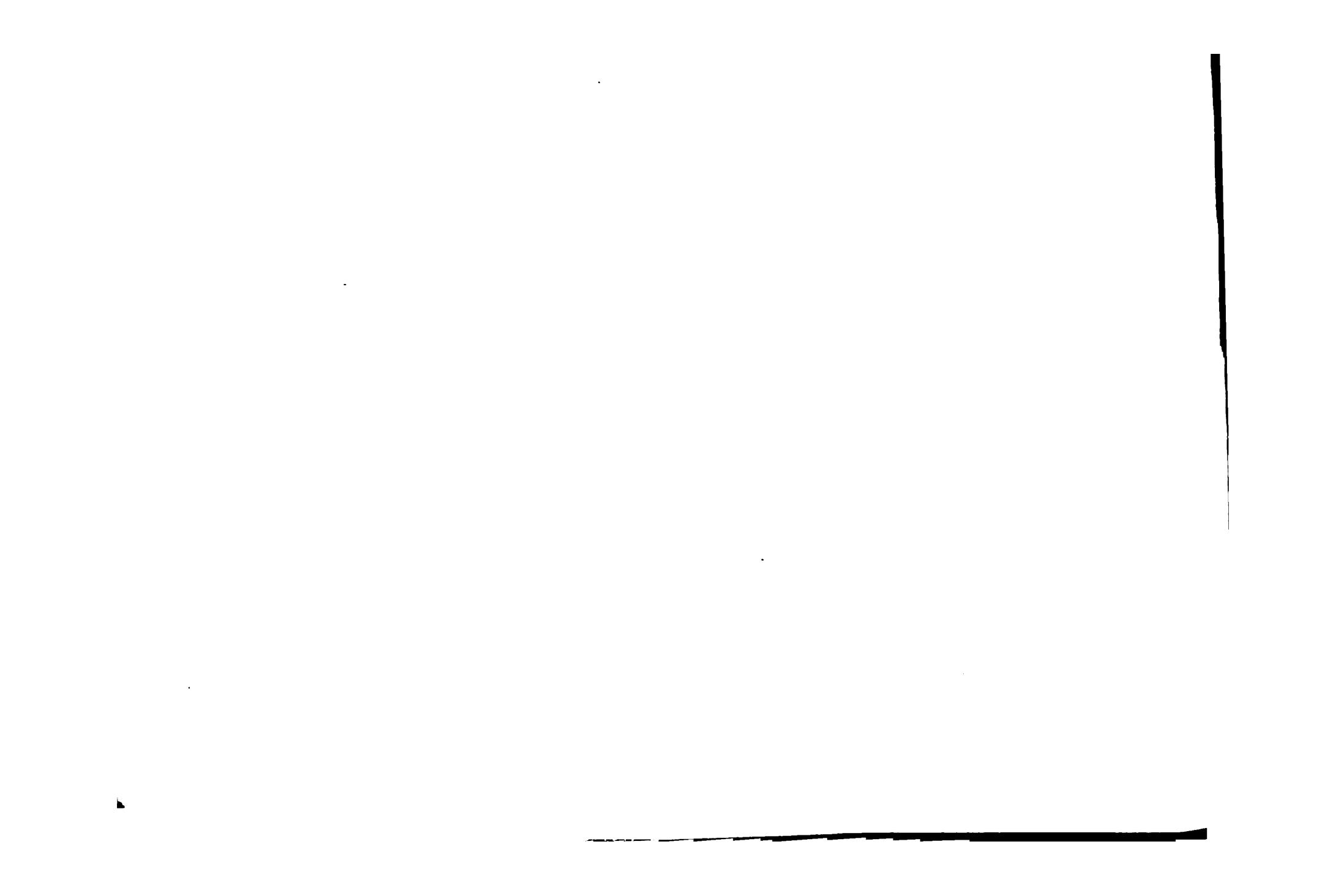
60 LBS. No. 112.

Chicago and North Western Ry., Co., 1883-84.



94 $\frac{1}{16}$ GROSS TONS TO THE MILE.

105 $\frac{1}{16}$ NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA
PA.

Wt. 60
No. 113

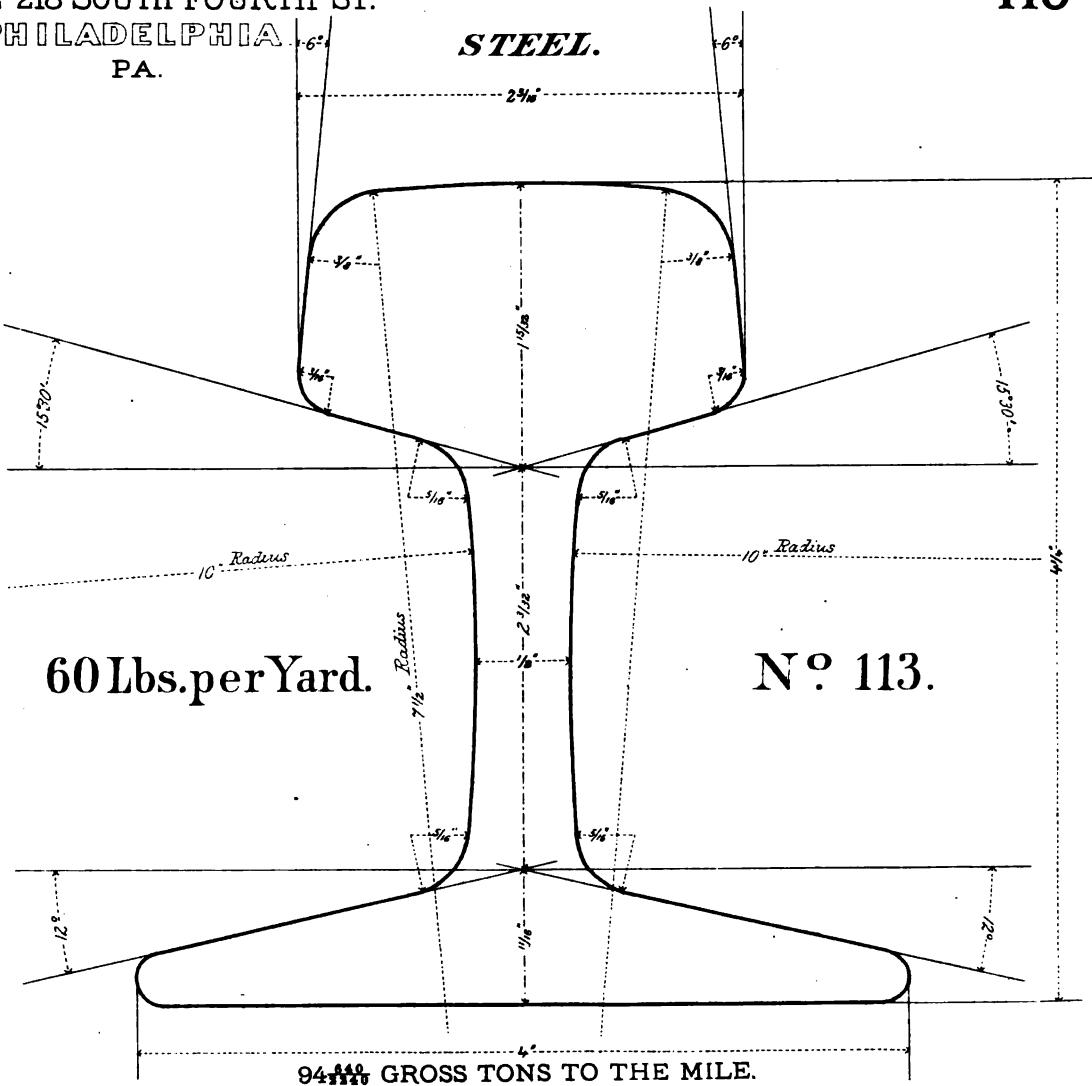
60 LBS. No 113.

Illinois Central R. R. Co., 1883.

St. Louis Coal Ry. Co., 1885.

Ashland Coal and Iron Ry., 1885.

Chicago, Rock Island and Pacific R. R., 1884.





CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

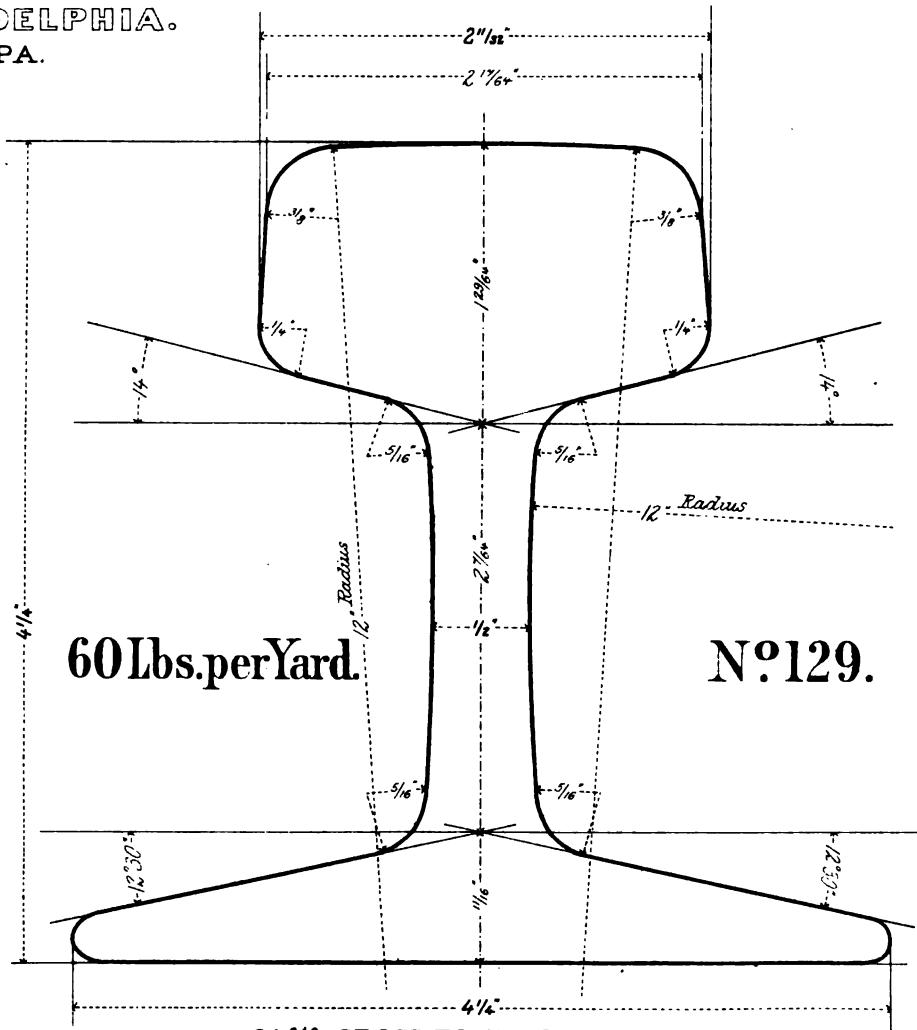
OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

STEEL.

Wt. **60**
No. **129**

60 LBS. No. 129.

Cincinnati, Hamilton and Dayton R. R., 1885.

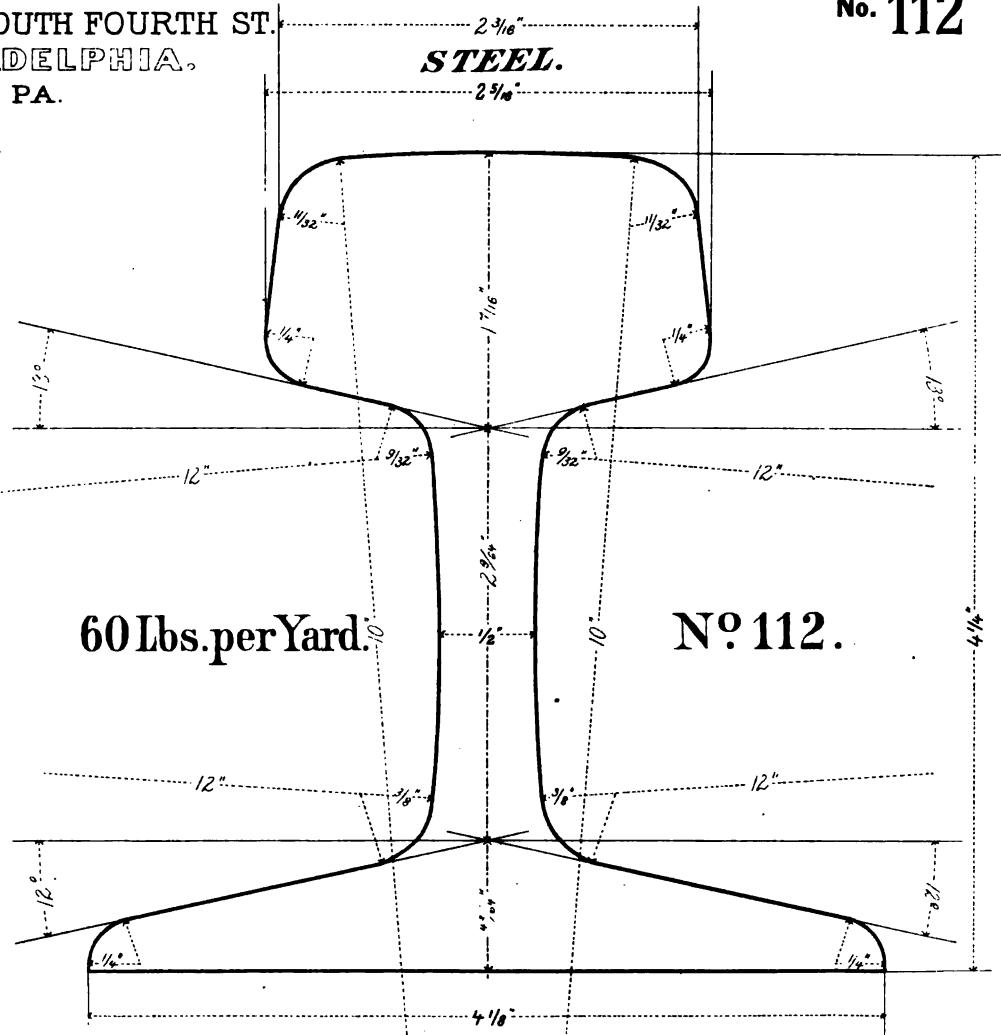




CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA,
PA.

Wt. 60
No. 112



60 LBS. No. 112.

Chicago and North Western Ry., Co., 1883-84.

60 Lbs.per Yard.

Nº 112.

94¹¹/₁₂ GROSS TONS TO THE MILE.

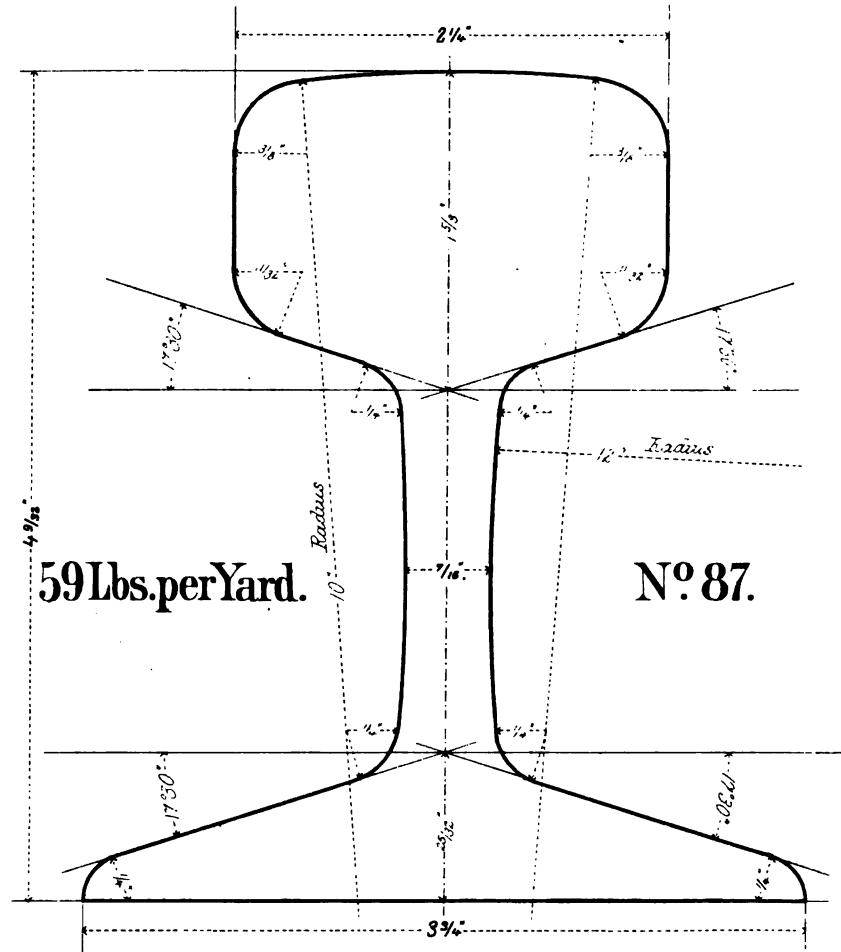
105¹¹/₁₂ NET TONS TO THE MILE.

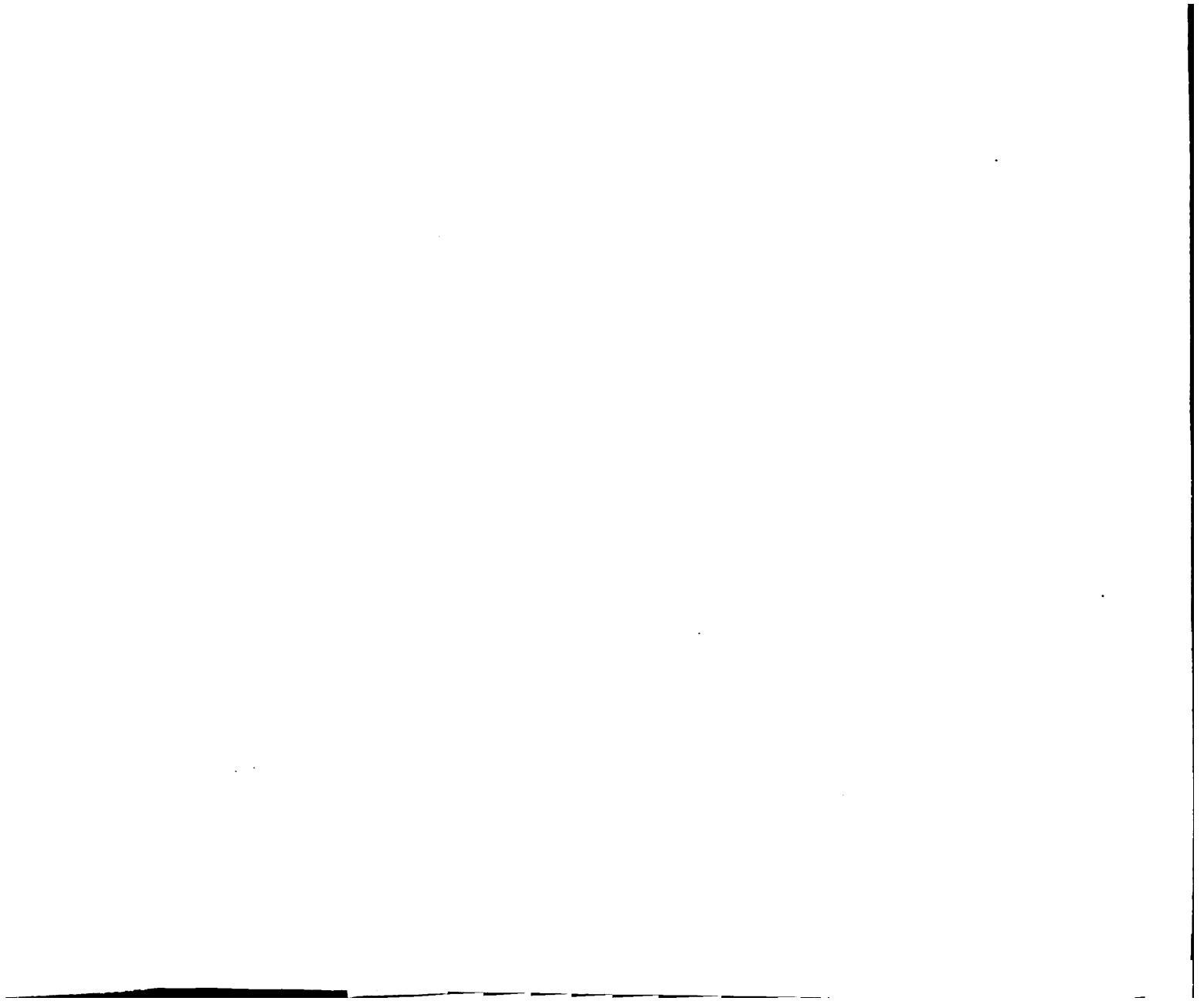
CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

wt. **59**
No. **87**

STEEL.





CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.

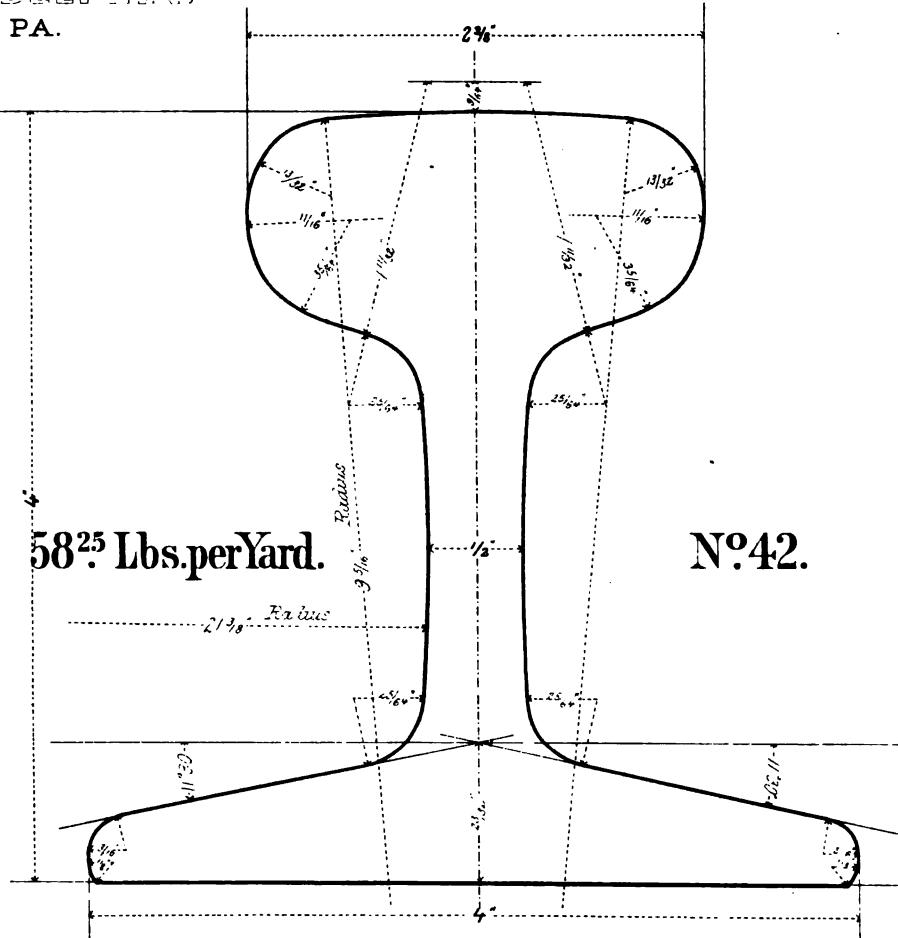
PHILADELPHIA.

PA.

Wt. 58²⁵

No. 42

STEEL.



58.25 LBS. No 42.

Chicago, Rock Island and Pacific R. R., 1873.

Philadelphia, Wilmington and Baltimore R. R., 1875.

Also 58, No. 54.

58²⁵ Lbs.perYard.

Nº42.

~~91¹¹/₁₆~~ GROSS TONS TO THE MILE.

~~102¹¹/₁₆~~ NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

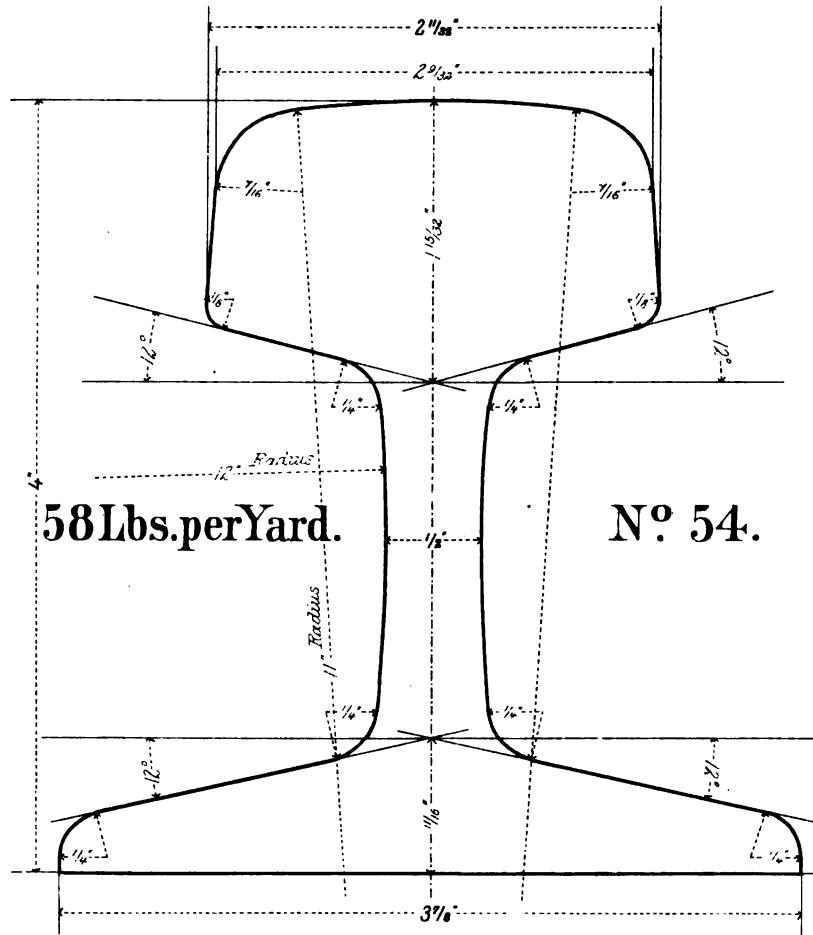
OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

Wt. 58
No. 54

58 LBS No 54.

Louisville and Nashville R. R., 1881-82.
Philadelphia, Wilmington and Baltimore R. R., 1875.
Also 58.25, No. 42.
Western Maryland R. R., 1875.
Louisville, Cincinnati and Lexington R. R., 1879-80.
Cincinnati, Hamilton and Dayton R. R., 1879.
See 60, No. 59.
Cleveland, Mt. Vernon and Columbus R. R., 1879.
Nashville, Chattanooga and St. Louis R. R., 1882-84.

STEEL.



91¹¹/₁₂ GROSS TONS TO THE MILE.
 102¹¹/₁₂ NET TONS TO THE MILE.

.....

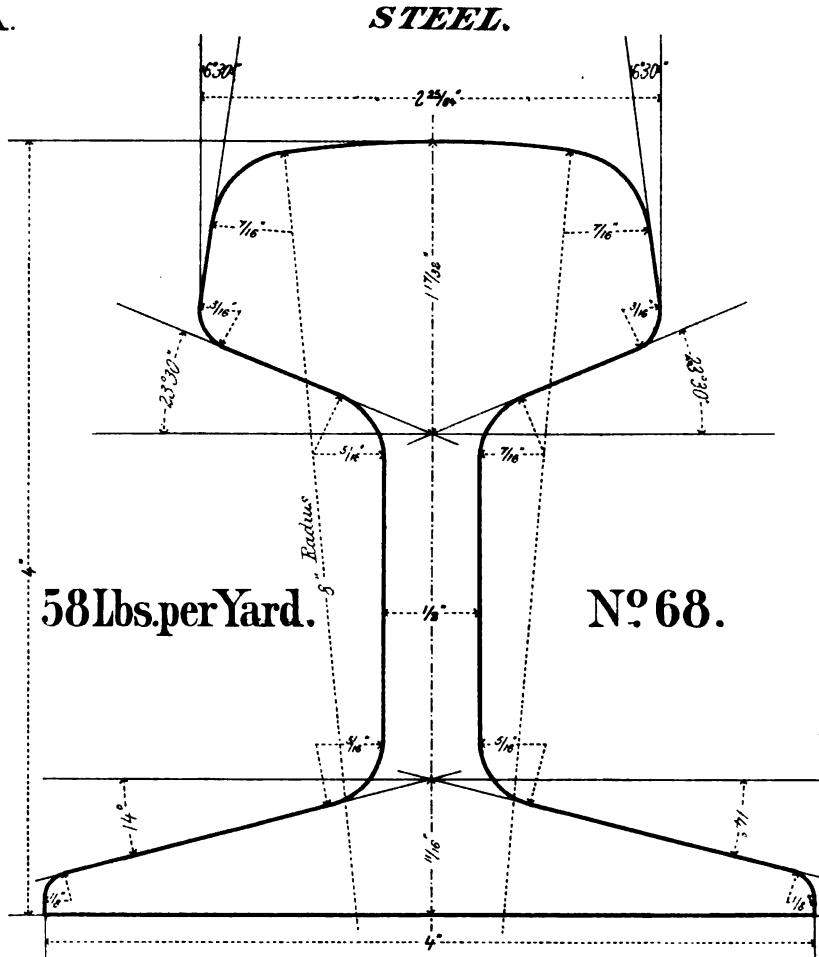
CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.

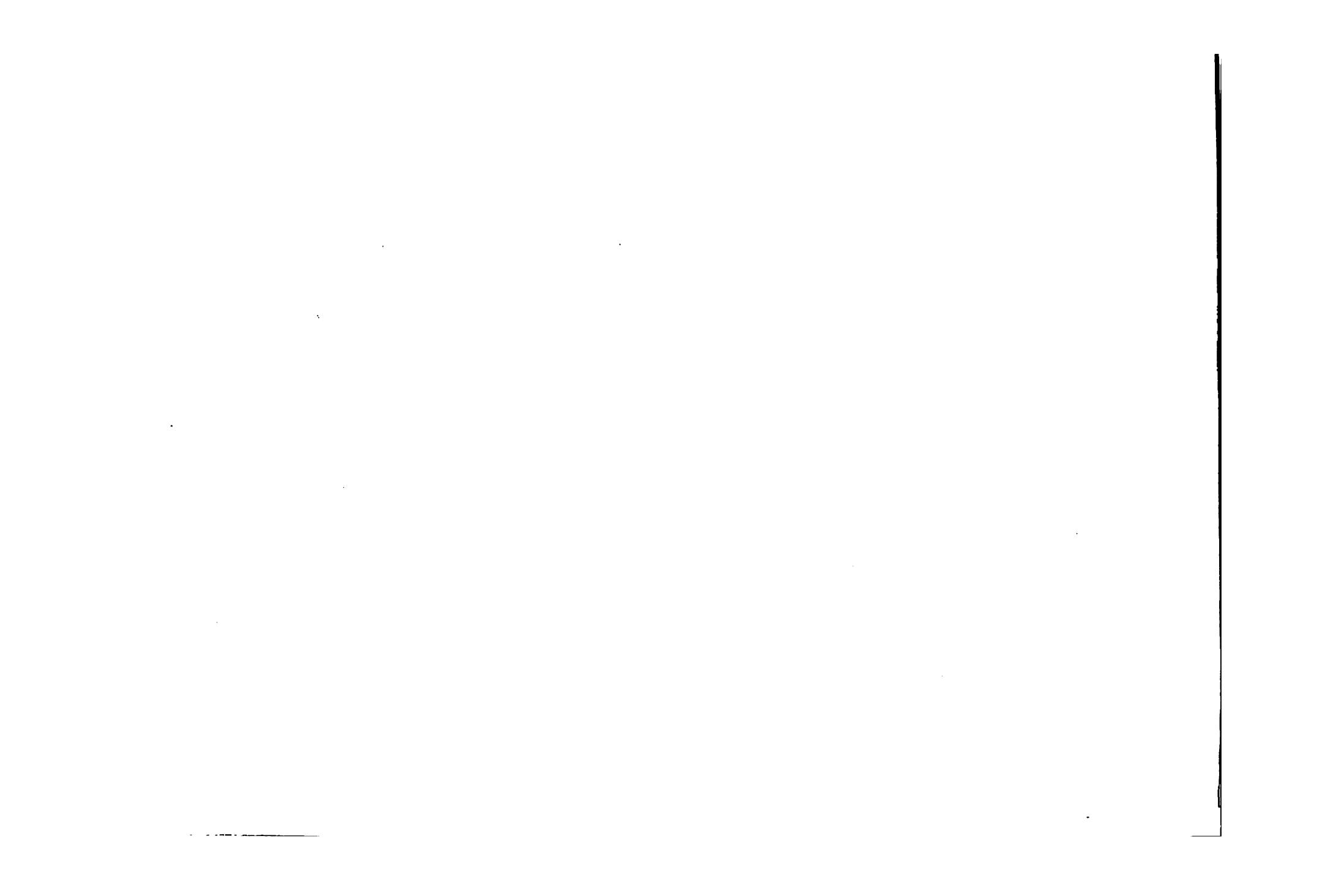
P.A.

Wt. 58
No. 68

58 LBS. No 68.
Lehigh Valley R. R., 1876.



91 $\frac{11}{16}$ GROSS TONS TO THE MILE.
102 $\frac{11}{16}$ NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

Wt. 56
No. 52

56 LBS. No 52.

Cumberland Valley R. R., 1877.

Old Colony R. R., 1875. See 56, No. 63.

Pennsylvania R. R., 1875. See 67, No. 55.

Northern (N. H.) R. R., 1875. See 56, No. 63.

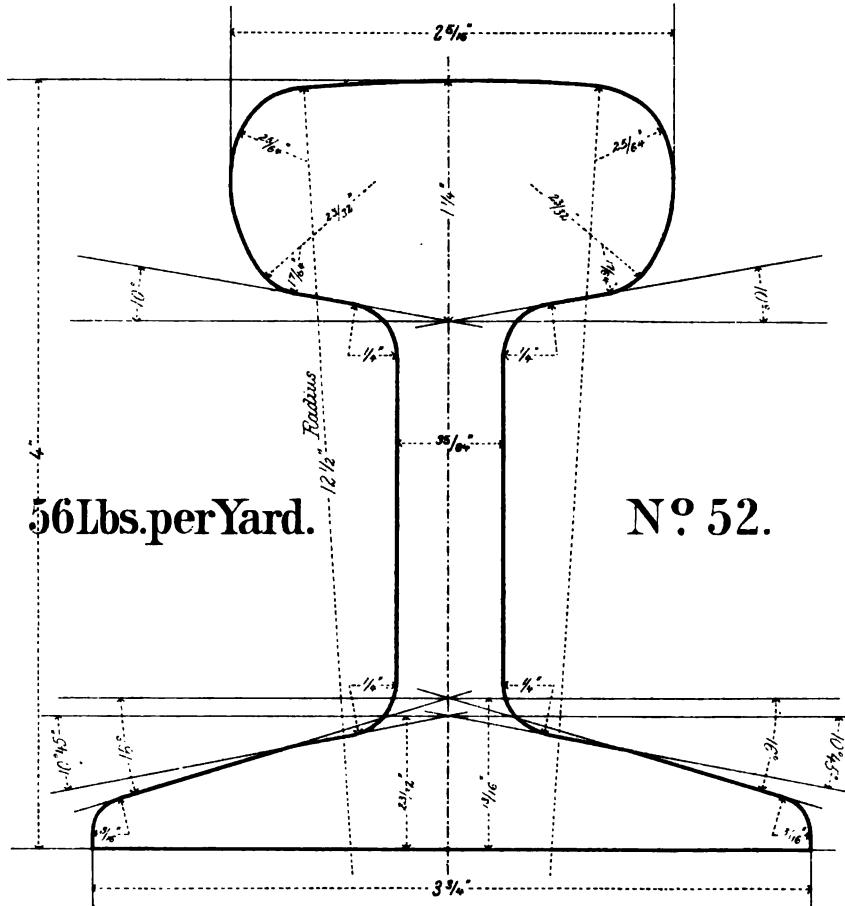
West Chester and Philadelphia R. R., 1876.

First Division St. Paul and Pacific R. R., 1876-77.

Indianapolis, Cincinnati and Lafayette R. R., 1876.

Mississippi Central R. R., 1877. Also 56, No. 63.

STEEL.



88 GROSS TONS TO THE MILE.

98~~11~~ NET TONS TO THE MILE.

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.

PHILADELPHIA.

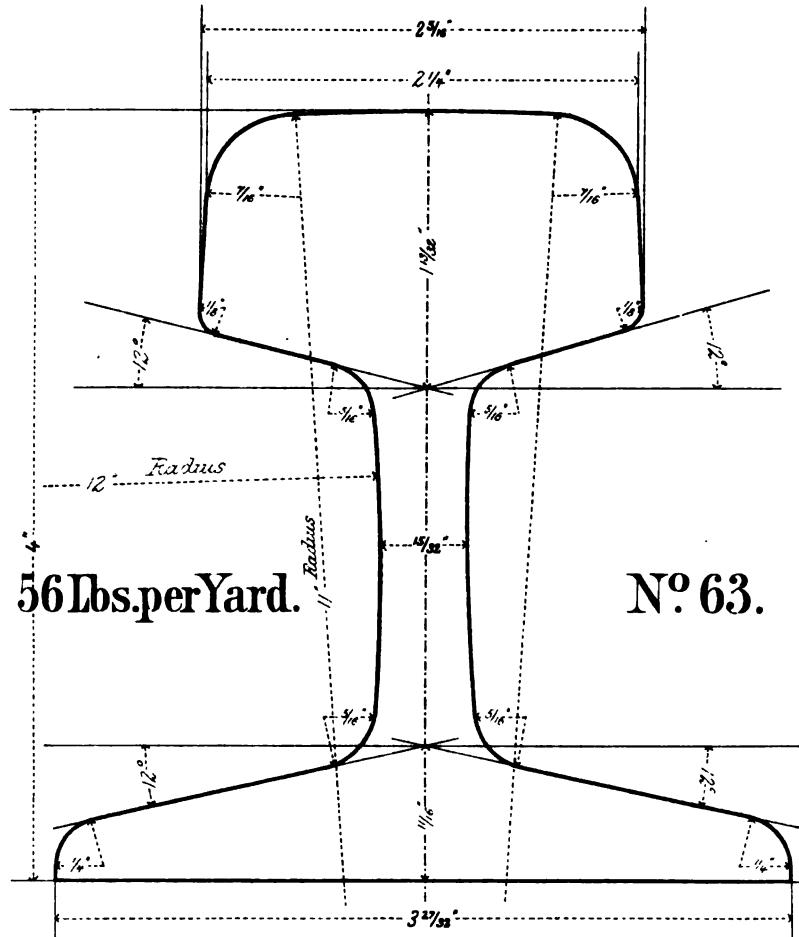
P.A.

56 LBS. No. 63.

- Mexican Central R. R., 1881.*
- New Orleans, Jackson and Northern R. R., 1877.*
- Springfield and New London R. R., 1875.*
- Old Colony R. R., 1877.*
- Northern (N. H.) R. R., 1876.*
- Concord R. R., 1876.*
- Shenango and Allegheny R. R., 1876.*
- Mississippi Central R. R., 1877. Also 56, No. 52.*
- Grand Rapids and Indiana R. R., 1878-79. See 56, No. 73.*
- Flint and Pere Marquette R. R., 1879-82-83-84.
Also 35, No. 81.*
- Mobile and Montgomery R. R., 1880.*
- Louisville, New Albany and Chicago R. R., 1881-82.*
- Chicago, St. Louis and New Orleans R. R., 1878.*
- St. Paul, Minneapolis and Manitoba R. R., 1884.*
- Louisville, New Albany and Chicago R. R. Co., 1883.*
- Carolina Central R. R., 1883.*
- Milwaukee and Northern R. R., 1883.*
- Cincinnati and Eastern R. R., 1883.*

Wt. **56**
No. **63**

STEEL.



88 GROSS TONS TO THE MILE.

98~~111~~ NET TONS TO THE MILE.



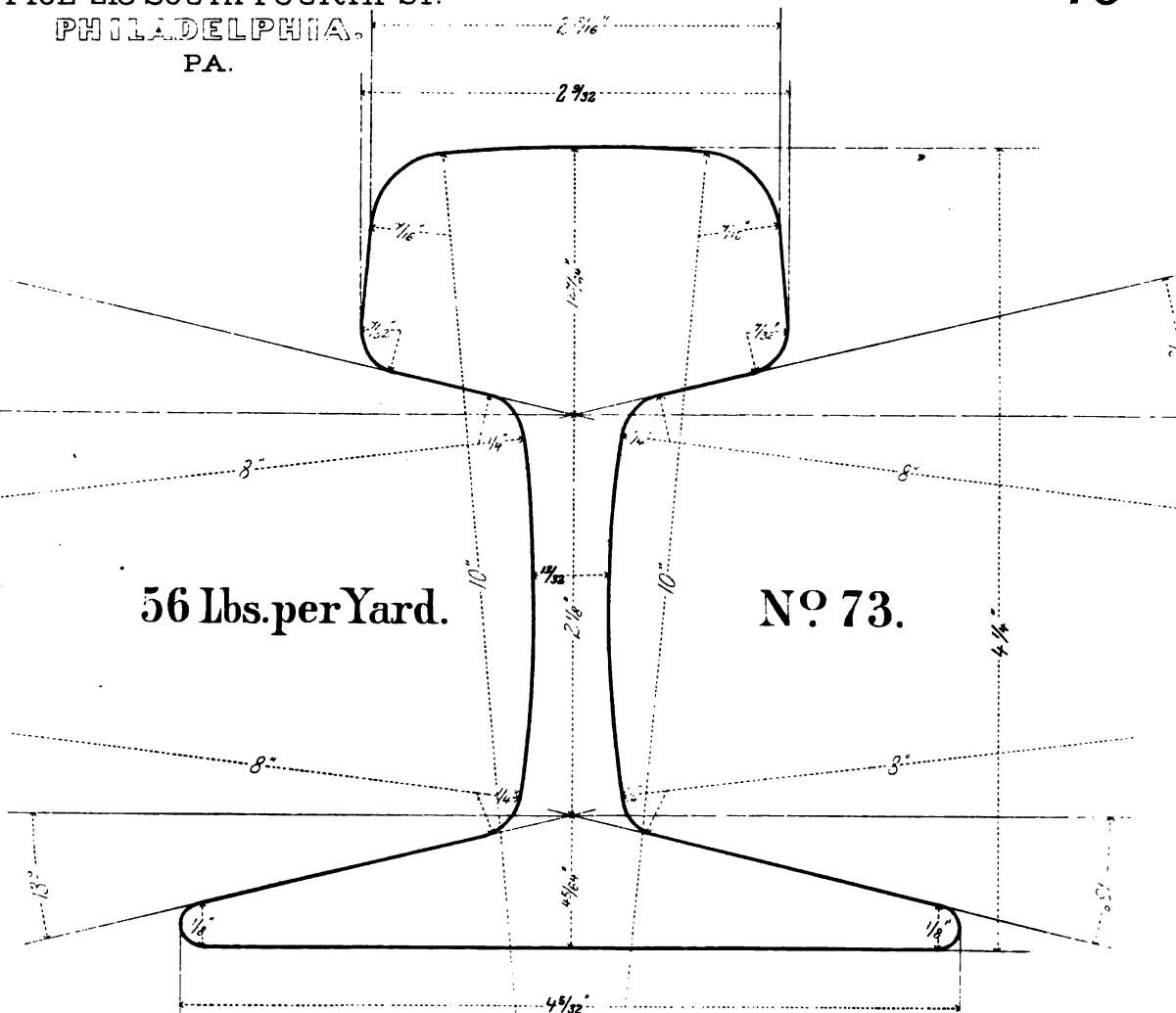
CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST. **STEEL.**
PHILADELPHIA.
PA.

Wt. **56**
No. **73**

56 LBS. No. 73.

gongier Valley Ry. Co., 1884.	Henry Bayard & Co., 1884.
T. Wilson & Co., 1882—84.	Texas and Pacific R. R., 1881—82—83.
nited Coal and Coke Co., 1884.	Memphis and Little Rock R. R., 1883.
uisville B. and I. Co., 1882—83.	Lake Erie and Western R. R., 1883.
xas and Pacific R. R., 1881—82.	Oil City and Chicago Ry., 1882.
alley R. R., 1879.	Norfolk and Western R. R., 1881—82.
cinnanti N. W. R. R., 1885.	Mexican Central R. R., 1881.
estern and Atlantic R. R., 1881.	
int and Pere Marquette R. R., 1884.	Western and Atlantic R. R., 1881.
uffalo, New York and Philadelphia R. R., 1883.	
est Virginia Central and P. R. R., 1884.	
nnsylvania R. R., (Standard 60 lbs., No. 56, reduced,) 1881—83.	
ilmington and Weldon R. R., (W. T. Walters), 1877.	
ast Tennessee, Virginia and Georgia R. R., (W. T. Walters), 1881.	
estern and Atlantic R. R., (W. T. Walters), 1881.	
nnsylvania R. R., for	
rand Rapids and Indiana R. R., 1881—82—83—84.	
umberland and Penna. R. R., 1879—80. Also 67, No. 55, and 60, No. 56.	
european and North American R. R., 1878.	
anover Junction, Hanover and Gettysburg R. R., 1877—83—84.	
ashville, Chattanooga and St. Louis R. R., 1879. See 52.6, No. 70.	
t. Paul, Min. and Manitoba R. R., 1881—82—83—84.	
Vilmington and Northern R. R., 1883—84—85.	
utural Mining and Mfg. Co., 1884.	
reen Bay, Winona and St. Paul Street Ry., 1884.	
nternational and Great Northern R. R., 1881—82—83.	
St. Louis, Iron Mountain and Southern R. R., 1883.	
issippi, Kansas and Texas R. R., 1883.	
lean and Salamanca R. R., 1882—83.	
Buffalo, Pittsburgh and Western R. R., 1882.	



1

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

PA

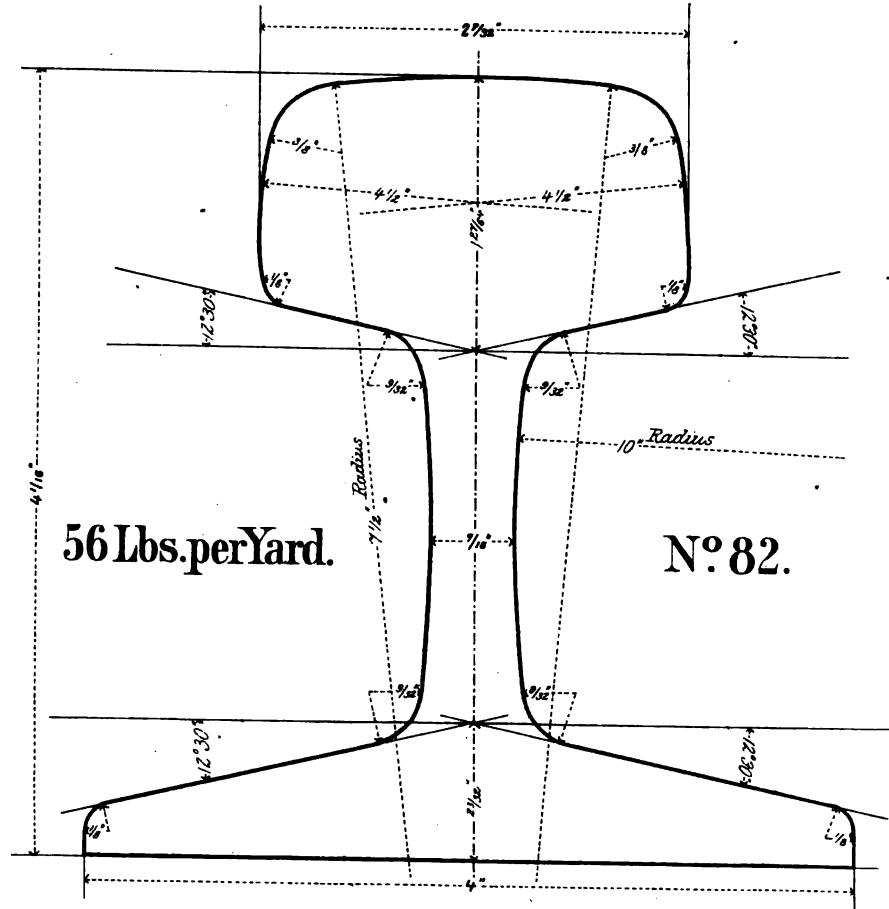
STEEL.

56 LBS. No. 82.

*Chicago, Burlington and Quincy R. R.
(Leased Lines and Branches), 1881.*

Burlington and Missouri River R. R., 1881.

Fort Scott, South Eastern and Memphis R. R., 1880.



**88 GROSS TONS TO THE MILE;
98~~111~~ NET TONS TO THE MILE.**

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

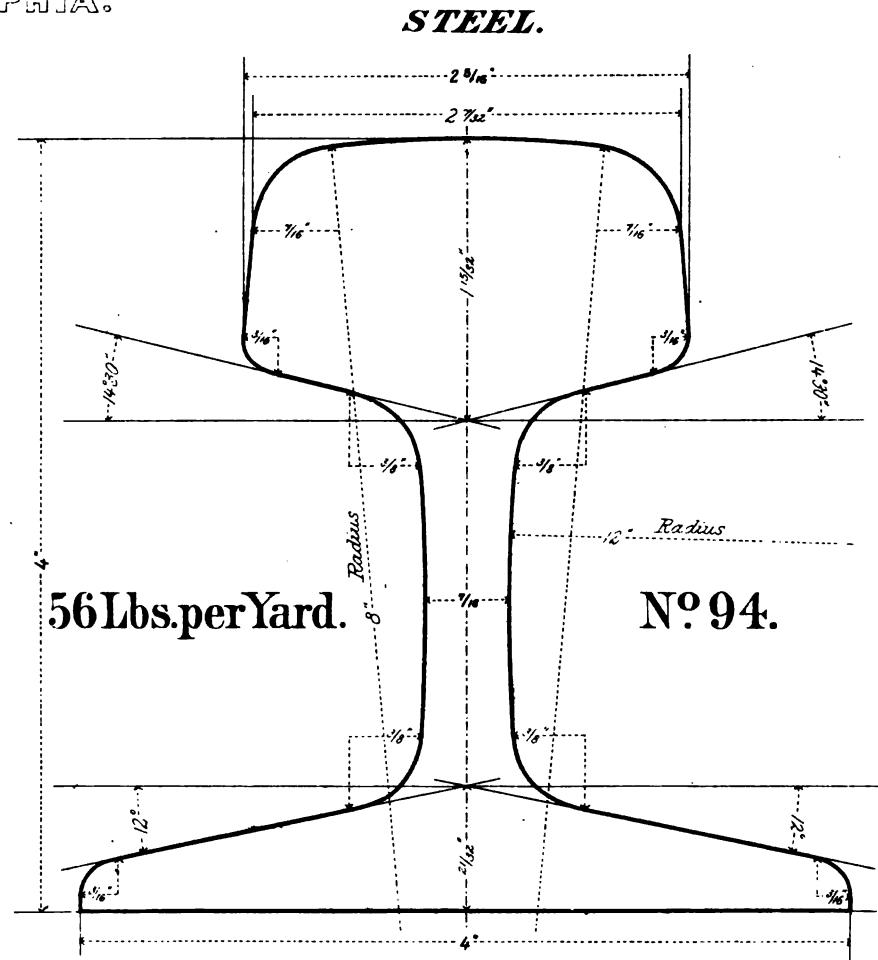
Wt. 56
No. 94

56 LBS. No. 94.

N. Y. New Eng. and West'n Investment Co., 1882-83.

Jacksonville Southeastern R. R., 1883-84.

Silver Lake R. R. Co., 1883.



88 GROSS TONS TO THE MILE.
98~~11~~ NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

Wt. **56**
No. **107**

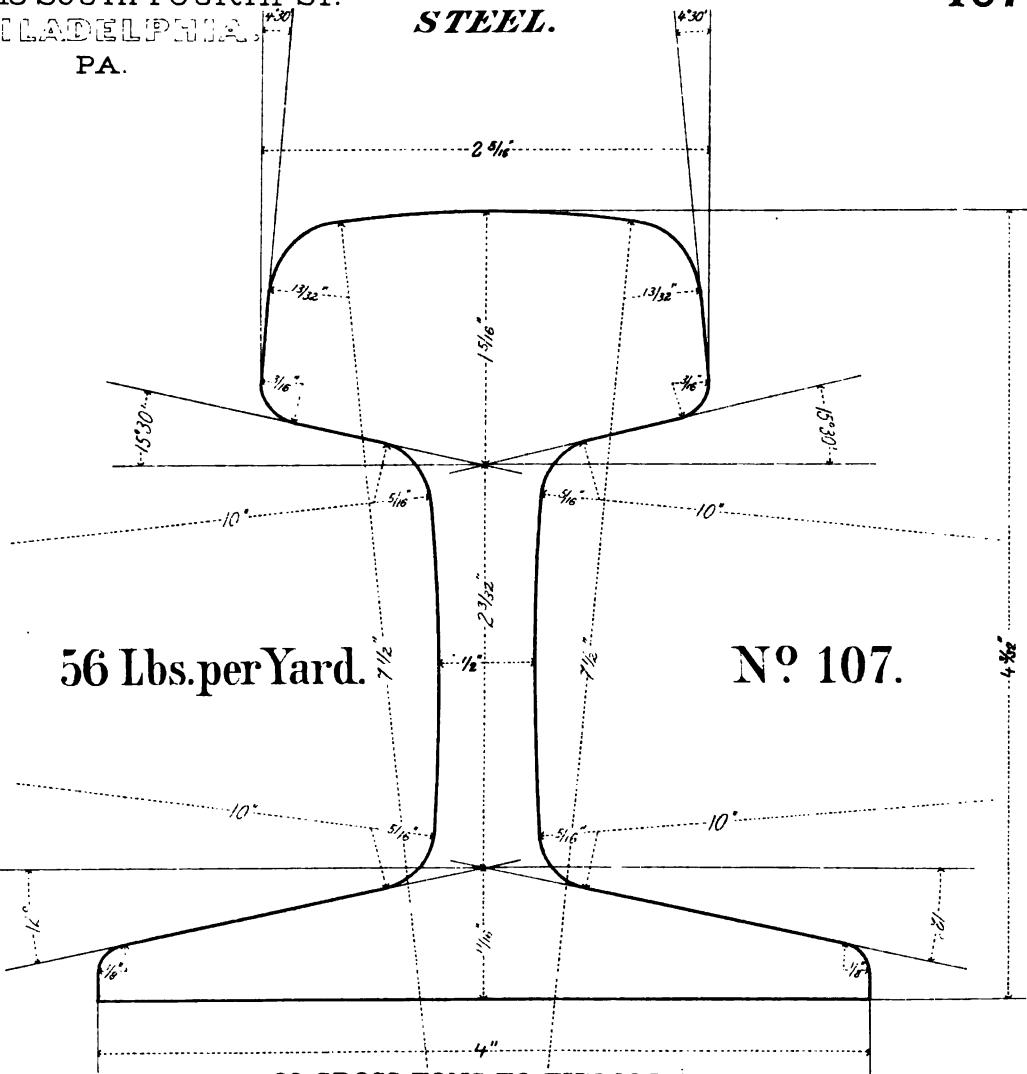
OFFICE 218 SOUTH FOURTH ST.

PHILADELPHIA,
PA.

STEEL.

56 LBS. No. 107.

Illinois Central R. R., 1883.



88 GROSS TONS TO THE MILE.

OR 66 NET TONS TO THE MILE

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

wt. 52⁶
No. 70

52.6 LBS. No. 70.

Nashville, Chattanooga and St. Louis R. R., 1880-83-84.

*Missouri, Kansas and Texas Ry. (Rolled down to 52 pounds),
1879.*

Cairo and Vincennes R. R. (Rolled down to 52 pounds), 1879.

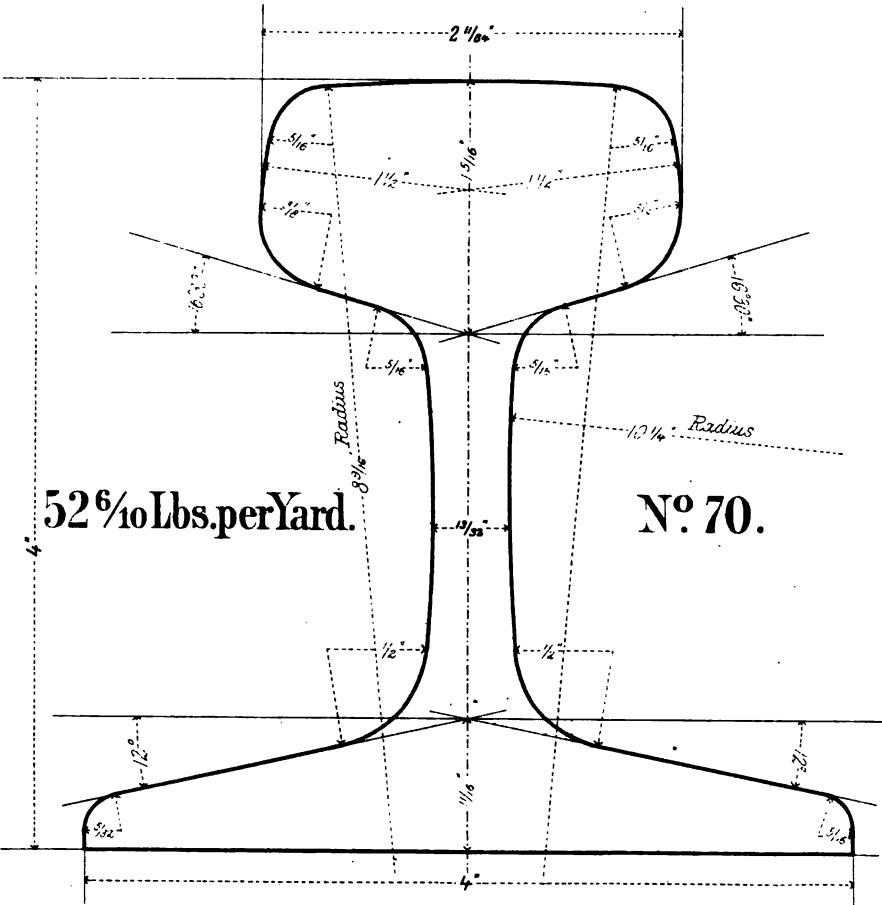
*Grand Rapids, Newaygo and Lake Shore R. R., 1880. (Rolled
down to 52 lbs., and 52.5 lbs.).*

Miller, Thomas & Co., 1879. (Rolled down to 52.5 lbs.).

Union Depot Co., 1881.

Mississippi and Tennessee R. R., 1881.

STEEL.



82~~144~~ GROSS TONS TO THE MILE.

92~~144~~ NET TONS TO THE MILE.

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.

PHILADELPHIA.

PA.

STEEL.

wt. 52

No. 109

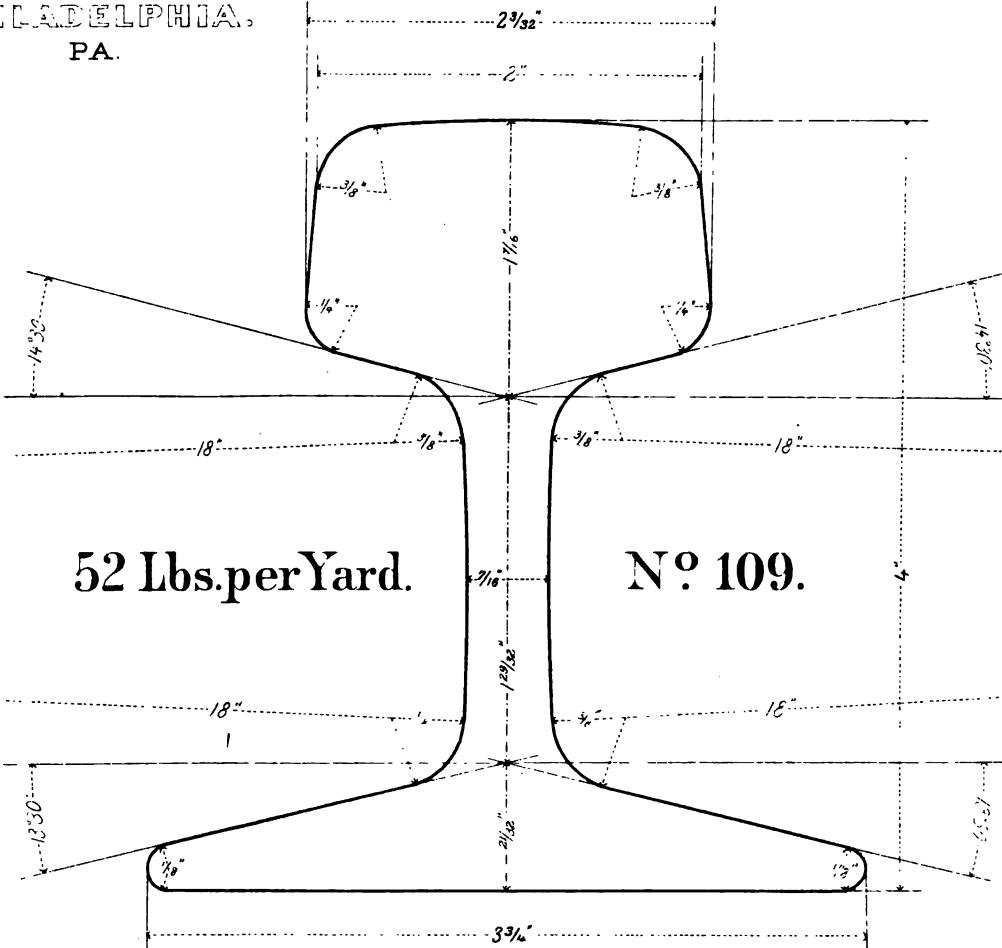
52 LBS. No. 109.

Brown, Howard & Co., 1883.

Michigan and Ohio R. R., 1883.

Western Maryland Ry. Co., 1884.

Pittsburgh and Lake Angeline I. Co., 1884.



52 Lbs.perYard.

Nº 109.

81~~111~~ GROSS TONS TO THE MILE.

91~~111~~ NET TONS TO THE MILE.

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

Wt. 50
No. 60

50 LBS. No. 60.

C. P. Huntington, 1881.

Pacific Improvement Co., 1882.

Central Pacific R. R., 1876.

Squankum and Freehold Marl Co., 1876.

Chesapeake and Ohio R. R., 1876.

New York Elevated Ry., 1876.

Connecticut and Passumpsic Rivers R. R., 1876.

Grand Rapids and Indiana R. R., 1875-80. See 56, No. 73.

Seaboard and Roanoke R. R., 1879-82-83-85.

Raleigh and Gaston R. R., 1879-83-85.

Fel River R. R. 1877

Mineral Range R. R. 1879-81-82-83-84

Maryland Union Coal Co. 1884

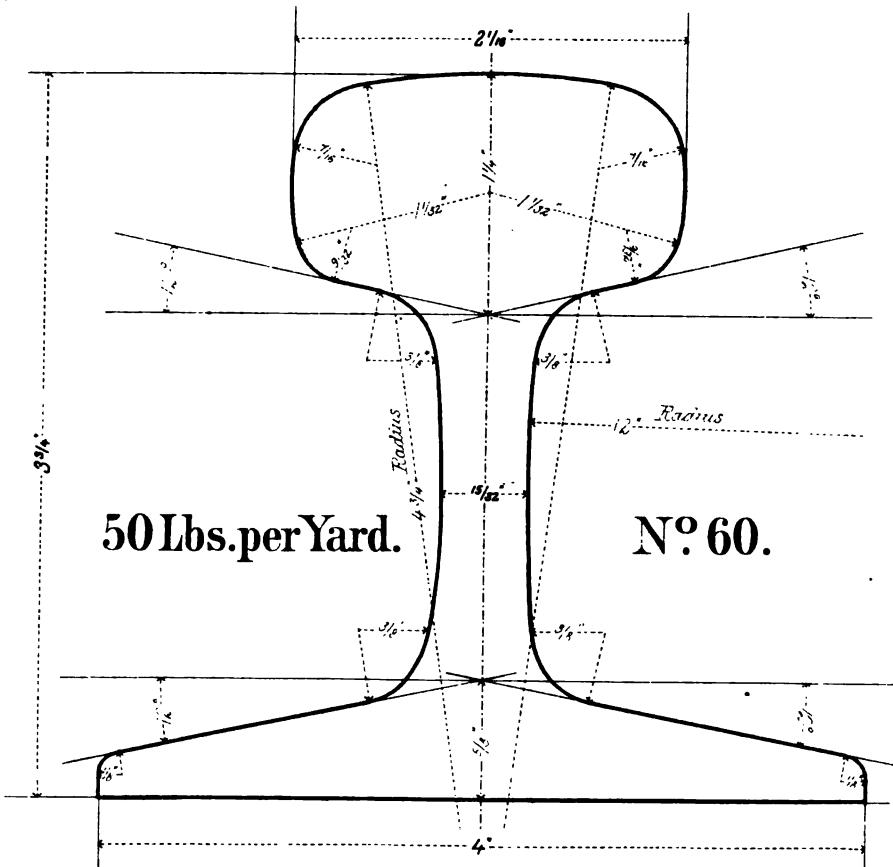
Carolina Central R. R. Co. 1883-84

Delaware, Maryland & Virginia R. R.

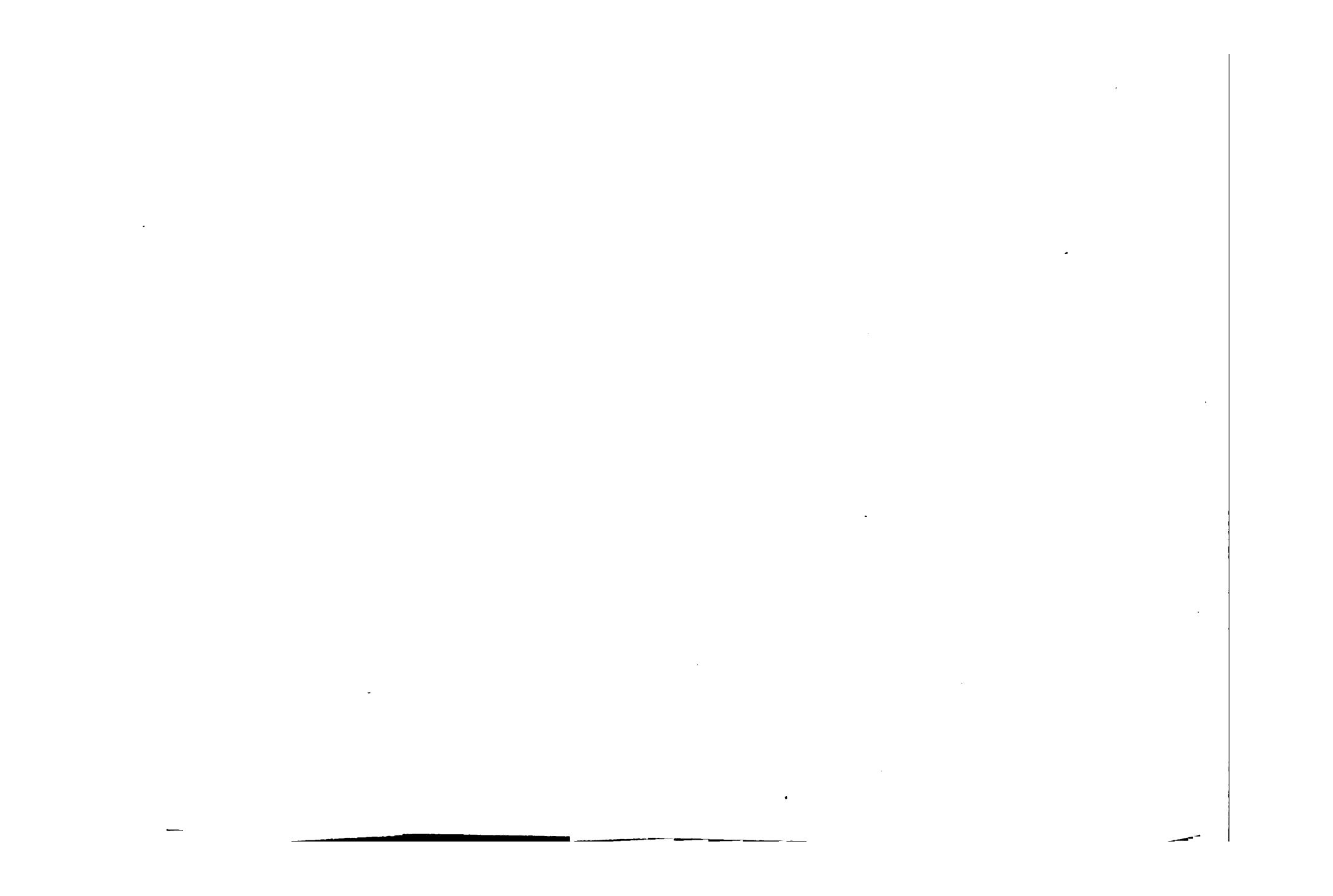
East Lexington and Big Sandy: P. P. 1882

THE BURGESS AND DRY SALTWATER FISH, 1888.

STEEL.



78 GROSS TONS TO THE MILE.
88 NET TONS TO THE MILE.

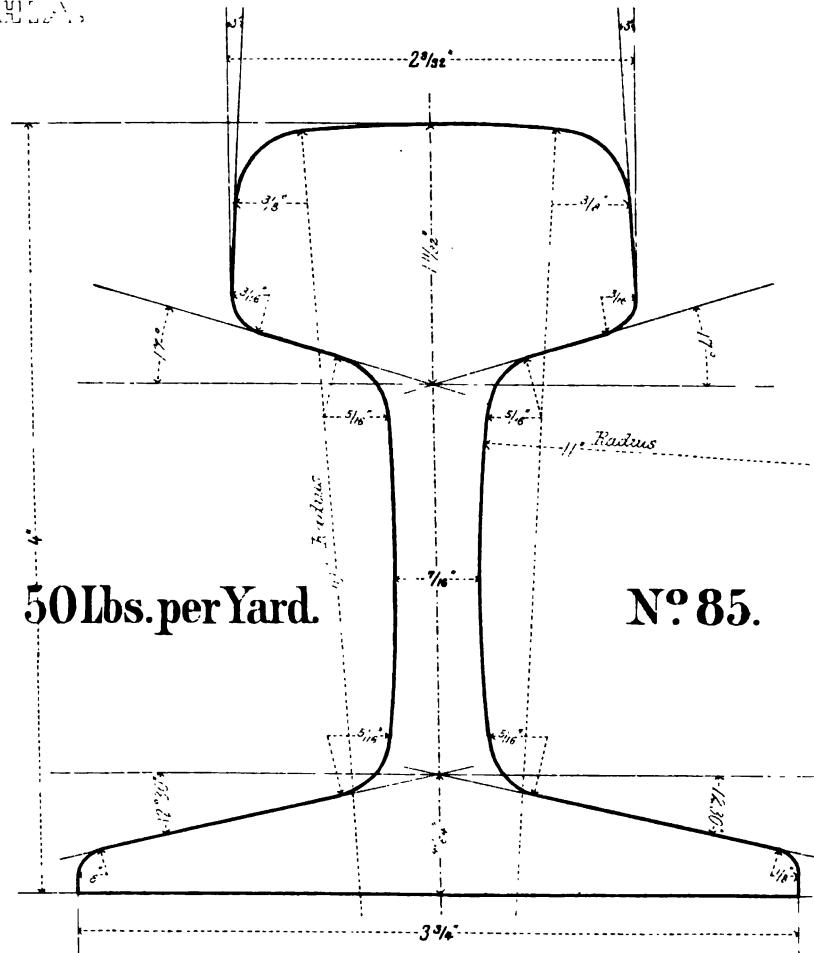


CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA,
PA.

wt. 50
No. 85

STEEL.



50 LBS. No. 85.

St. Louis, Kansas and Arizona R. R., 1880.

Union Depot Co., 1880-81.

*Grand Rapids, Newaygo and Lake Shore R. R., 1879.
Also 52.6, No. 70.*

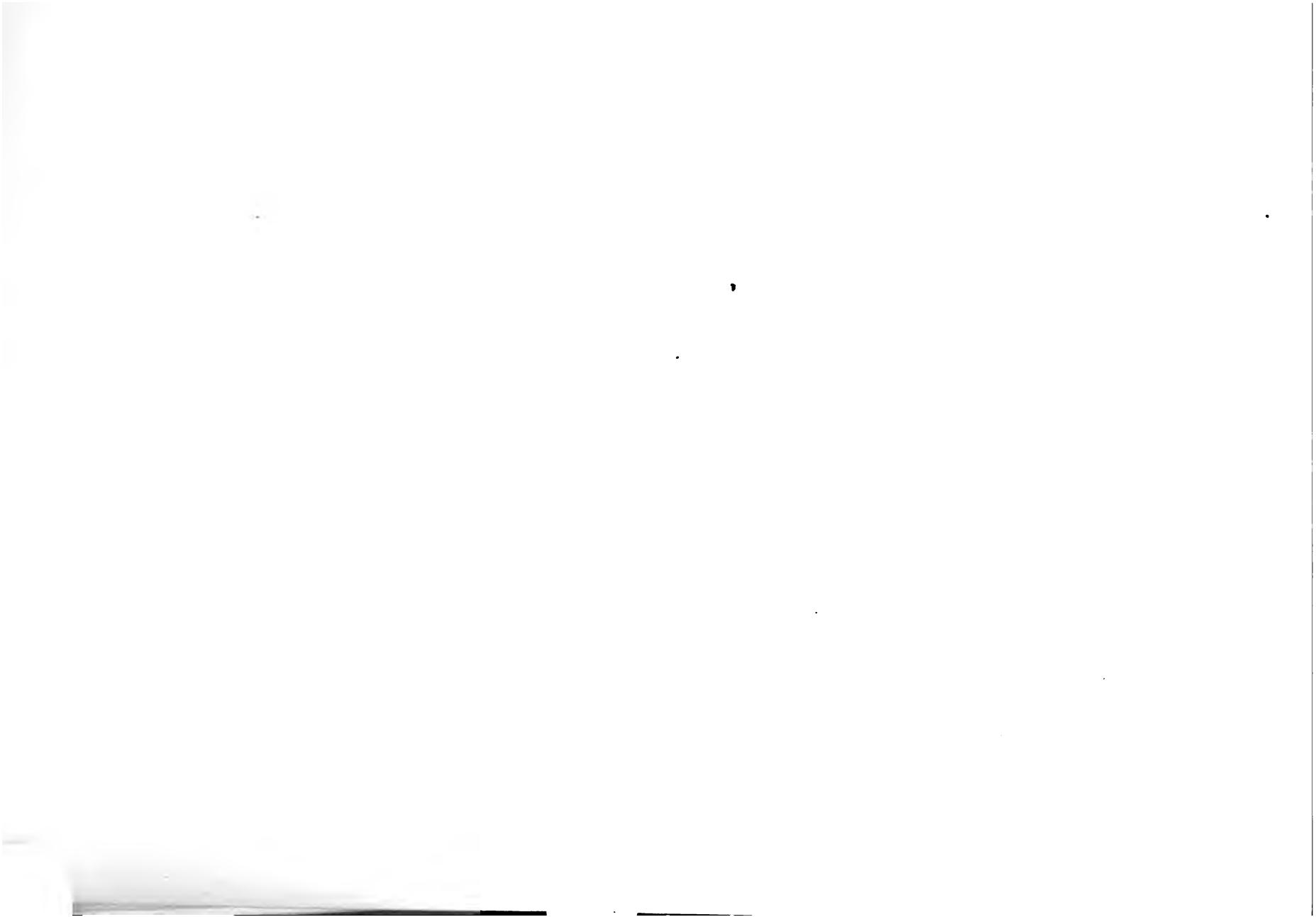
Pennsylvania R. R., 1882.

R. T. Wilson & Co., 1882.

Grand Rapids and Indiana R. R., 1882.

Bells Gap R. R. Co., 1882.

78~~44~~ GROSS TONS TO THE MILE.
88 NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.

P.A.

Wt. **50**
No. **100**

50 LBS. No. 100.

Grand Rapids and Indiana R. R., 1883.

Pennsylvania R. R., Branch Lines, 1883-84.

Cin., Van Wert and Mich. Common Carrier Co., 1883.

Toledo, Cincinnati and St. Louis, 1883.

Alexandria Coal Co., 1884.

Pontiac, Oxford and Port Austin R. R., 1884.

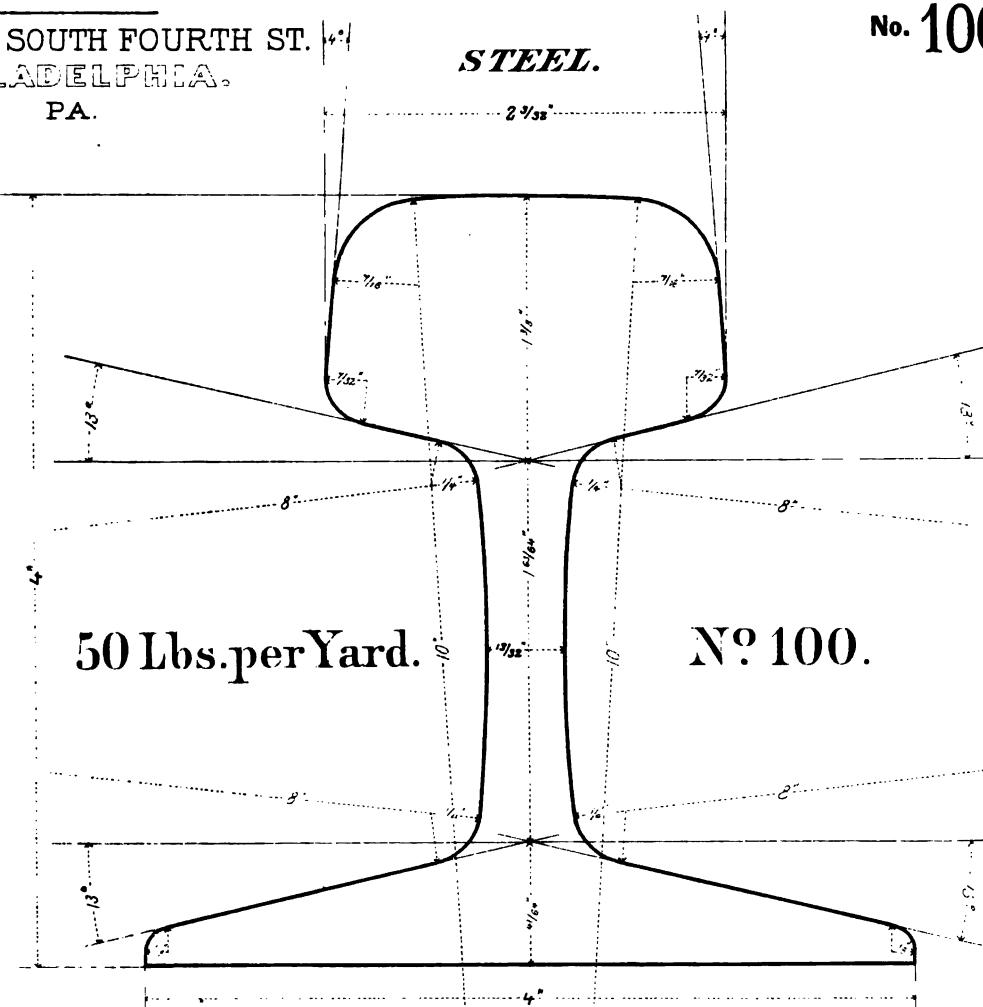
Kansas City Cable Ry., 1884.

Tuckerton R. R. Co., 1883-84.

Cincinnati, Van Wert and M. C. Con. Co., 1883.

Conglomerate Mining Co., 1883.

R. A. Alger and J. S. Newberry, 1882.



78~~44~~ GROSS TONS TO THE MILE.

88 NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.

PHILADELPHIA.

PA.

wt. 40
No. 90

40. LBS No. 90.

Monongahela and P. Creek Gas Coal Co., 1882.

Cincinnati Northern R. R. Co. 1881.

Peachbottom R. R. Co., 1881.

Calumet and Hecla Mining Co., 1882.

Baltimore and Delta Ry., 1881-82.

Rio Grande Extension Co., 1881. Also 30, No. 71.

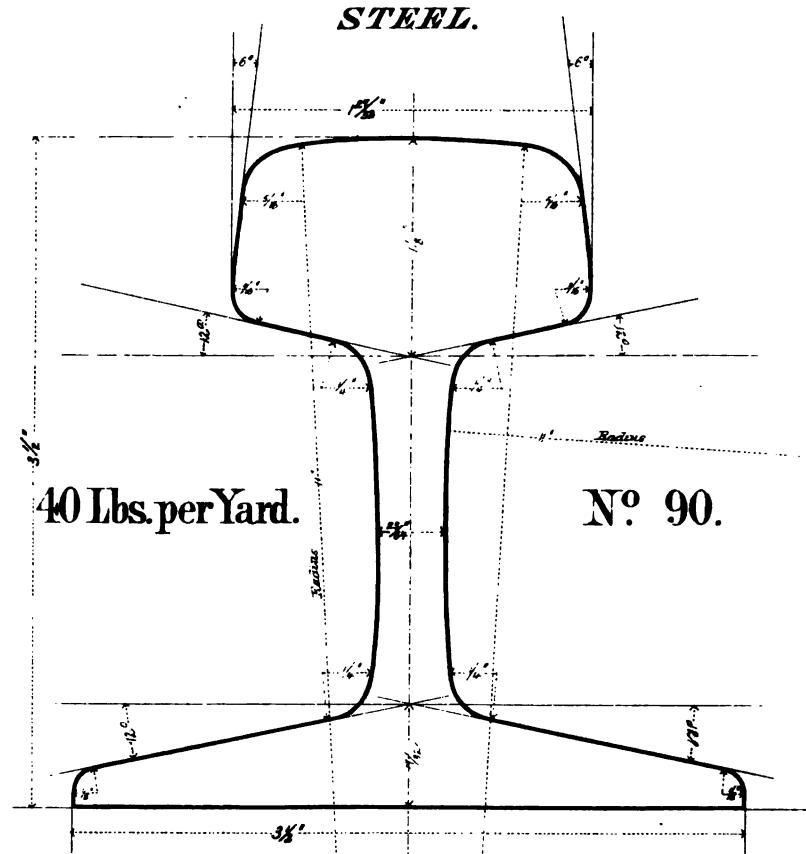
Maryland Union Coal Co., 1884.

Herkimer, Newport and Poland R. R., 1882-84.

Maryland Central R. R. Co., 1883-84.

Everett Iron Co., 1883.

Charleston M. and M. Co., 1882.



62 1/2 GROSS TONS TO THE MILE.

70 1/2 NET TONS TO THE MILE.



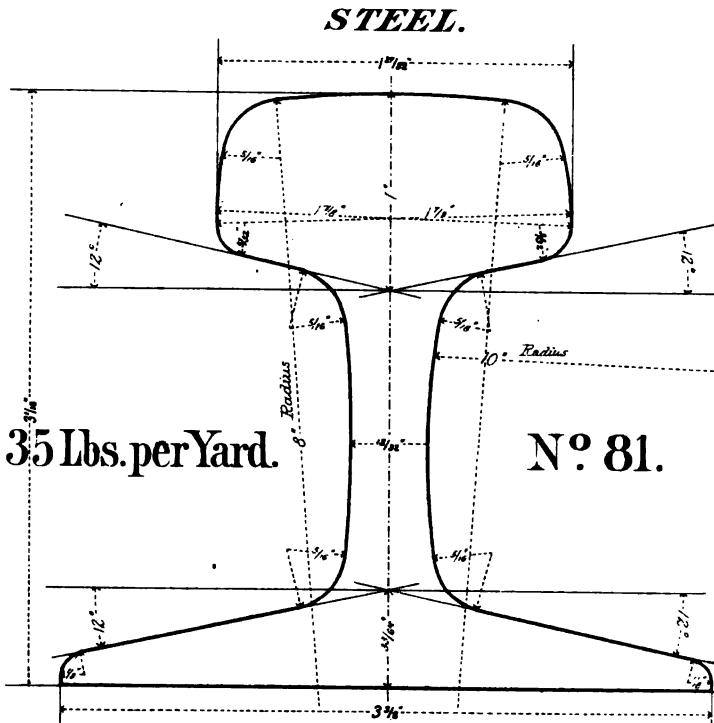
CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

Wt. 35
No. 81

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

35 LBS. No. 81.

New York, New England and West. Invest. Co., 1883.
Pensacola and Perdido R. R., 1883.
Worcester and Shrewsbury Ry., 1882—83.
Danville and New River R. R., 1883.
Nashville, Chattanooga and St. Louis Ry., 1883.
Arizona Copper Co., 1883.
Buffalo, N. Y. and P. R. R., 1883.
Texas and St. Louis Ry. Co., 1884.
Mineral R. R. and Mining Co., 1883—84.
Youngstown and Connotton Valley R. R., 1880.
Connotton Valley R. R., 1880.
Flint and Pere Marquette Ry., 1879. Also 56, No. 63.
Thos. R. Lyon, 1880—84.
Port Huron and N. W. R. R., 1884.
Calumet and Hecla Mining Co., 1883—84.
R. T. Wilson & Co., 1884.
Lykens Valley Coal Co., 1883—84.
Summit Branch R. R. Co., 1884.
Tionesta Valley R. R. Co., 1884.
Illinois Central R. R., 1884.
Kansas City and R. Street Ry., 1883.
Chicago and Western Dummy Co., 1883.
Chippewa Lumber and Boom Co., 1882.
Keystone Coal Co., 1882.
R. A. Alger and J. S. Newberry, 1882.
Fayette Coke and Furnace Co., 1882.
D. S. Cook, 1883.
C. D. Allen, 1882.
Horton, Crary & Co., 1882.
Alger, Smith & Co., 1882.
Lykens Valley R. R., 1883.



55 GROSS TONS TO THE MILE.
61~~188~~ NET TONS TO THE MILE.

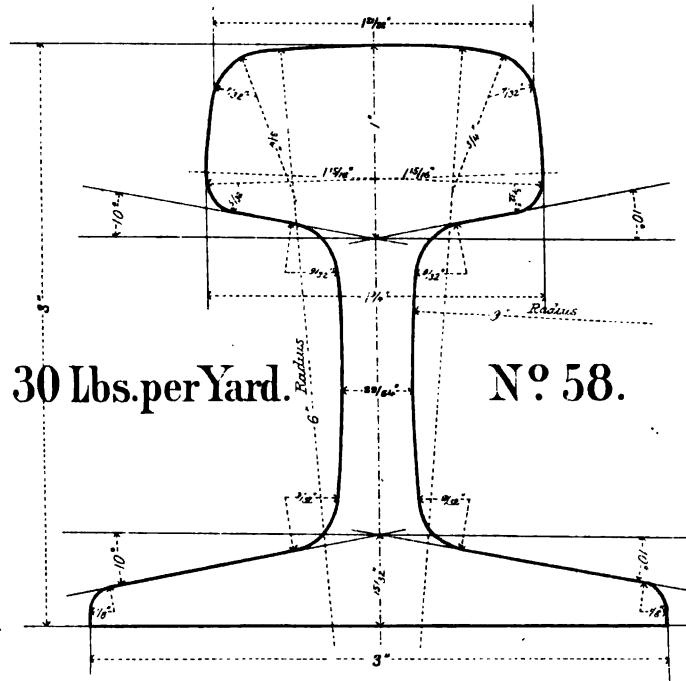


CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

Wt. 30
No. 58

STEEL.



30 LBS. NO. 58.

30 Lbs.per Yard. Rubber

47~~11~~ GROSS TONS TO THE MILE.

~~52~~ NET TONS TO THE MILE.

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

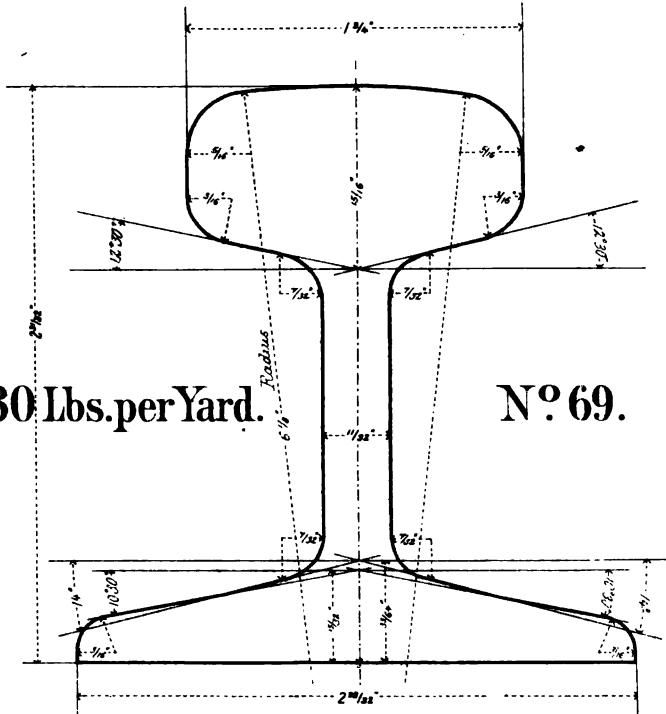
OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

wt. 30
No. 69

30 LBS. No. 69.

30 Lbs.per Yard. N° 69.

STEEL.



47~~110~~ GROSS TONS TO THE MILE.
52~~110~~ NET TONS TO THE MILE.

CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

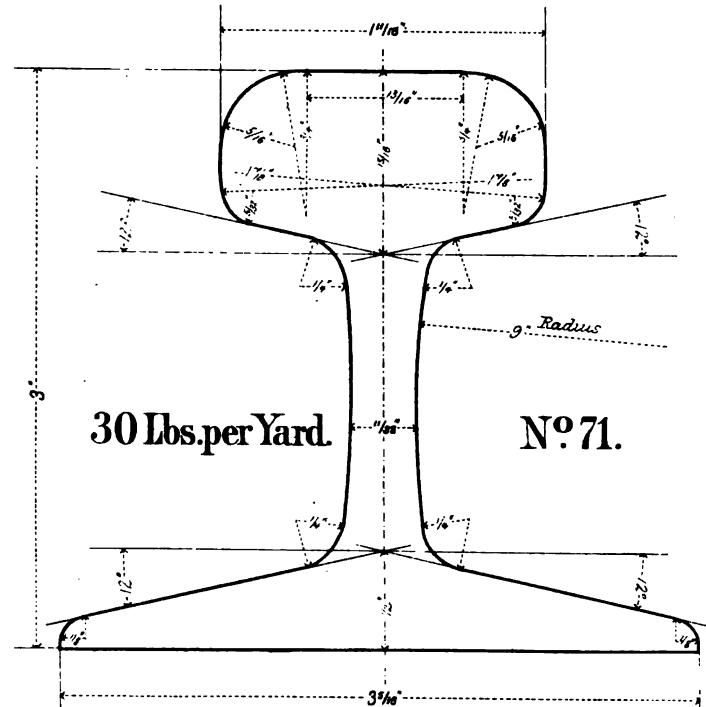
OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

wt. 30
No. 71

30 LBS. No. 71.

Cumberland and Penna. R. R., 1883.	Danville and New River R. R., 1883.
Galveston City R. R. Co., 1883.	Fairchance Furnace Co., 1882.
Houston Street Ry., 1884.	Bridgeton and Saco R. R., 1882.
Greenlick N. G. Ry., 1884.	Yale & Towne Mfg. Co., 1882.
Fire Creek Coal and Coke Co., 1884.	H. N. Lamb, 1882.
Denver and Rio Grande Ry., 1878.	R. G. Peters, 1882.
Parker and Karns City R. R., 1879.	R. E. Schmertz & Co., 1882.
G. L. & D. E. Wing, 1880—82.	Blodget & Byrne, 1882.
W. S. Ladd, Agent, 1878.	Morley Bros., 1882.
Karns City and Butler R. R., 1878.	McCline & Co., 1882.
Consolidation Coal Co., 1885.	Palmer, Nichols & Co., 1882.
Brown, Howard & Co., 1884.	Frank Williams & Co., 1882.
Salisbury Coal Co., 1884.	C. D. Allen, 1882.
E. E. Jackson & Co., 1882—84.	Fletcher, Pack & Co., 1882.
Gay Mfg. Co., 1884.	Bell, Lewis & Yates, 1882.
Potomac Coal Co., 1883—84.	Alger, Smith & Co., 1882.
Argyle Coal Co., 1884.	McClure Co., 1882.
Grand Haven Lumber Co., 1883.	Thos. W. Bell, 1882.
Charlotte Furnace Co., 1883.	M. Erskine Miller, 1882.
Juniata Mining Co., 1883.	D. C. George, 1881.
New England, Fairmount and W. G. C. Co., 1883.	Rosemon Lumber Co., 1882—83—84.
Wheeling and Elm Grove R. R., 1883—84.	Gratwick, Smith & Fryer Lumber Co., 1883—84.
Rio Grande Extension Co., 1881. Also 40, No. 90.	Altantic and Danville R. R., 1883—84.
Clarkburg, W. and G. R. R., 1882—84.	West Virginia, Cent. and Pittsburgh R. R., 1883—84.
Norfolk, Virginia Beach Ry. and Iron Co., 1883.	Beaver Creek and C. River C. and C. Co., 1883.

STEEL.



47¹¹¹/₁₀₀ GROSS TONS TO THE MILE.

52¹¹¹/₁₀₀ NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

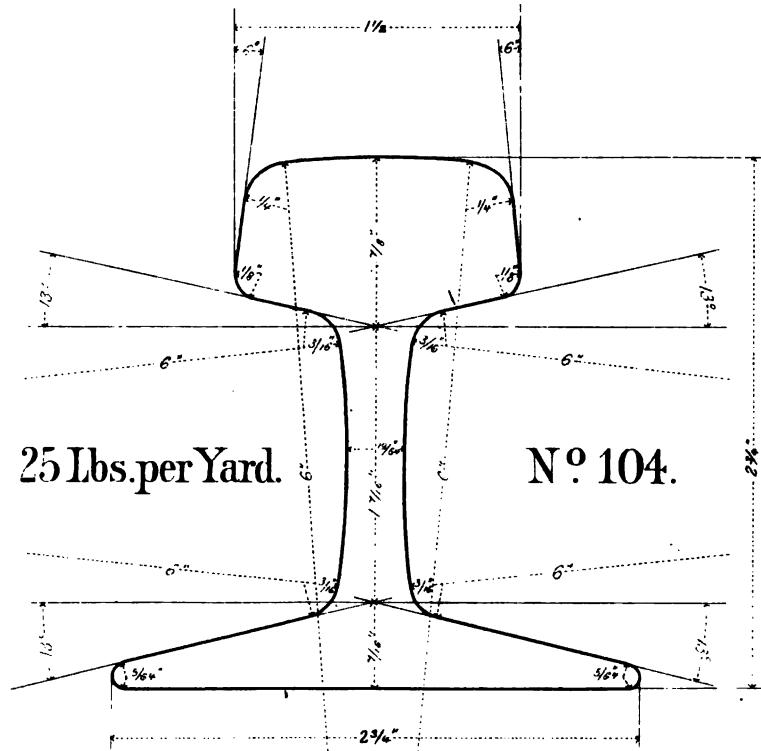
OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

wt. **25**
No. **104**

25 LBS. No. 104.

Fisher, Miller & Co., 1884.
Hoover, Hughes & Co., 1884.
Bliss & Marshall, 1884.
Wm. A. Harris, 1884.
Shields & Dorwin, 1884.
Thos. Collins, 1884.
John McGovern, Son & Co., 1884.
Brooklyn Street Ry., 1884.
Eden Park Street Ry. Co., 1884.
Greenleaf, Johnson & Son, 1884.
Jacksonville S. E. R. R. Co., 1884.
Mineral R. R. and Mining Co., 1883—84.
Hillside Coal and Iron Co., 1883—84.
Morley Bros., 1883.
Balto. Union Pass. Ry., 1885.
Cumberland and Penna. R. R., 1884.
Mill Springs, Current River and Barnesville Ry., 1884.
North Western Mining and Exchange Co., 1883—84.
Summit Branch R. R., 1883—84.
Lykens Valley Coal Co., 1884.
Hamilton Street Ry. Co., 1884.
Cumberland, Hydraulic Cement and Mfg. Co., 1884.
Maryland Union Coal Co., 1884.
State Lumber Co., 1884.
Fort Worth Street Ry. Co., 1884.
Lykens Valley R. R. Co., 1883.
Chippewa Lumber Co., 1883.
Youghiogheny R. R., 1883.
Burns & Noakes, 1882.
Wheeler & Dusenbury, 1882.
Yale & Towne Mfg. Co., 1882.
Jno. A. Wood & Son, 1882.
Henry Stephens & Co., 1882.
Hartley & Marshall, 1882.

STEEL.



25 Lbs.per Yard.

Nº 104.

39⁴⁴/₄₅ GROSS TONS TO THE MILE.

44 NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

Wt. **20**
No. **122**

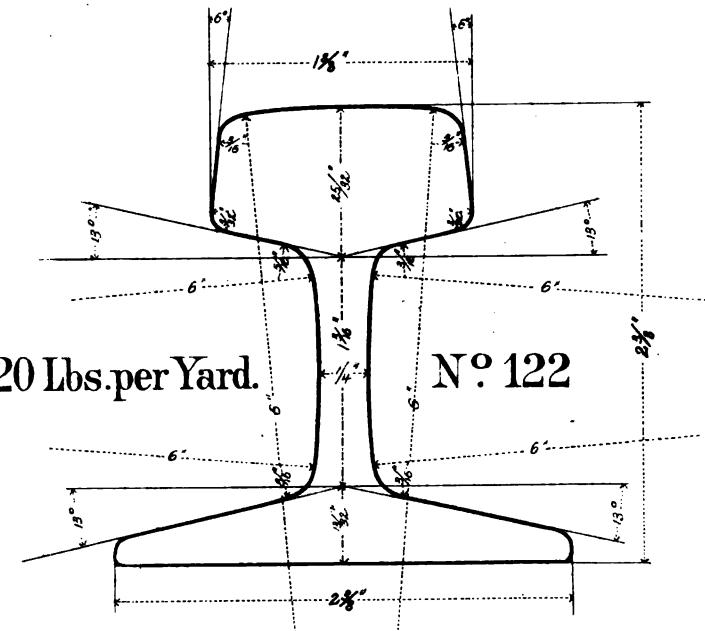
20 LBS. No. 122.

Juniata Valley Coal Co., 1885.

Campbell's Creek Coal Co., 1884.

Bliss & Marshall, 1884.

STEEL.



20 Lbs.per Yard.

31 ~~100~~ GROSS TONS TO THE MILE.

35 ~~100~~ NET TONS TO THE MILE.



CAMBRIA IRON & STEEL WORKS, JOHNSTOWN, PENNA.

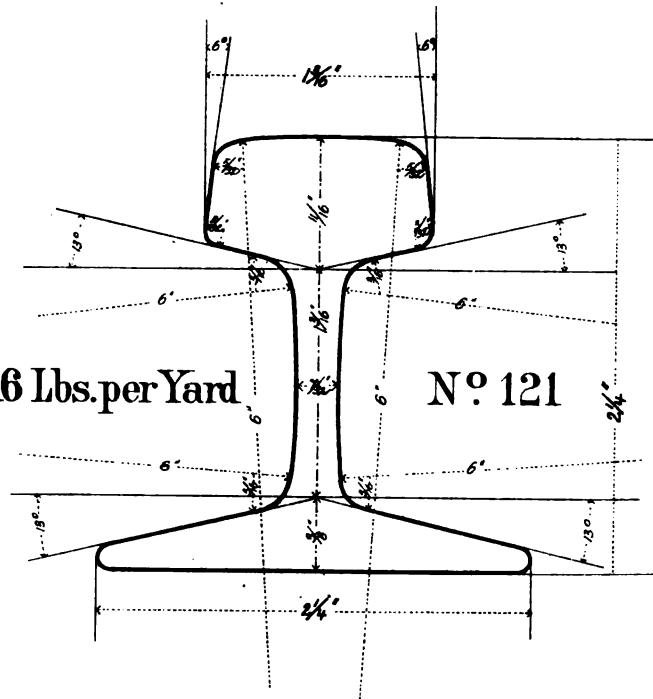
OFFICE 218 SOUTH FOURTH ST.
PHILADELPHIA.
PA.

wt. 16
No. 121

16 LBS. No. 121.

Whitehead & Co., 1886.
Thompson, Ashburner & Co., 1885.
McFadden & Kelly, 1885.
P. McLaughlin, 1884.
Daniel Cessna, 1884.
Thos. H. Selby & Co., 1884.
Beecher & Copeland, 1884.
Isabella Furnace Co., 1884.
W. H. Piper & Co., 1884.

STEEL.



25~~111~~ GROSS TONS TO THE MILE.
28~~111~~ NET TONS TO THE MILE.

1





Eng 838.86.3
Sections of steel and iron rails, m
Cabot Science 009584054



3 2044 091 884 189

C A M B R I A